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IMPLEMENTATION COMPLETION AND RESULTS REPORT

TF-018700

ON A

GRANT

IN THE AMOUNT OF US$8 MILLION

TO THE

REPUBLIC OF INDIA

FOR THE

SUSTAINABLE LIVELIHOODS AND
ADAPTATION TO CLIMATE CHANGE PROJECT

June 15, 2020

Agriculture and Food Global Practice
Sustainable Development
South Asia Region

CURRENCY EQUIVALENTS

(Exchange Rate Effective {Dec 31, 2019})

Currency Unit =	INR
INR 71.24 =	US$1
US$ =	SDR 1

FISCAL YEAR

April 1 – March 31

Regional Vice President:	Hartwig Schafer
Country Director:	Junaid Kamal Ahmed
Regional Director:	John A. Roome
Practice Manager:	Mary Kathryn Hollifield
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ABBREVIATIONS AND ACRONYMS

AM	Aide Memoire
BRLPS	Bihar Rural Livelihoods Promotion Society
CCA	Climate Change Adaptation
CCAP	Climate Change Adaptation Plan
CEO	Chief Executive Oficer
CHC	Custom Hiring Center
CPF	Country Partnership Framework
CPS	Country Partnership Strategy
CRPs	Community Resource Persons
DEA	Department of Economic Affairs
EFA	Economic and Financial Analysis
GEF	Global Environment Facility
GoI	Government of India
ICAR	Indian Council of Agricultural Research
ICRR	Implementation Completion and Results Reporting
IDA	International Development Association
ISM	Implementation Support Mission
ISR	Implementation Status Report
IUFR	Interim Unaudited Financial Report
KVK	Krishi Vigyan Kendra
LTSA	Lead Technical Support Agency
MGNREGA/S	Mahatma Gandhi National Rural Employment Guarantee Act/Scheme
MoRD	Ministry of Rural Development
MoEFCC	Ministry of Environment, Forestry and Climate Change
MPSRLM	Madhya Pradesh State Rural Livelihoods Mission
M&E	Monitoring and Evaluation
NAPCC	National Action Plan on Climate Change
NGO	Non-Government Organization
NICRA	National Initiative on Climate Resilient Agriculture
NIRD&PR	National Institute of Rural Development and Panchayati Raj
NMMU	National Mission Management Unit
NMSA	National Mission for Sustainable Agriculture
NRLM	National Rural Livelihoods Mission
NRLP	National Rural Livelihoods Project
PAD	Project Appraisal Document
PCR	Project Completion Report
PDO	Project Development Objective
PMIS	Project Management Information System
RF	Results Framework
SCCF	Special Climate Change Fund
SHG	Self-Help Group
SLACC	Sustainable Livelihoods and Adaptation to Climate Change (“the project”)
SMMU	State Mission Management Unit
SRLM	State Rural Livelihoods Mission
UC	Utilization Certificate
VO	Village Organization

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DATA SHEET

BASIC INFORMATION

Product Information

Project ID	Project Name
P132623	Sustainable Livelihoods and Adaptation to Climate Change
Country	**Financing Instrument**
India	Investment Project Financing
Original EA Category	**Revised EA Category**
Partial Assessment (B)	Partial Assessment (B)

Organizations

Borrower	Implementing Agency
Republic of India	Ministry of Rural Development

Project Development Objective (PDO)

Original PDO

The Project Development Objective (PDO) is to improve adaptive capacity of the rural poor engaged in farm-based livelihoods to cope with climate variability and change.

PDO as stated in the legal agreement

The Project Developmental Objective (PDO) is to improve adaptive capacity of the rural poor engaged in farm livelihoods to cope with climate variability and change

FINANCING

	Original Amount (US$)	Revised Amount (US$)	Actual Disbursed (US$)
World Bank Financing			
TF-18700	8,000,000	7,181,722	7,181,722
Total	**8,000,000**	**7,181,722**	**7,181,722**
Non-World Bank Financing			
Borrower/Recipient	2,170,000	4,670,000	4,190,000
Total	**2,170,000**	**4,670,000**	**4,190,000**
Total Project Cost	**10,170,000**	**11,851,722**	**11,371,722**

KEY DATES

Approval	Effectiveness	MTR Review	Original Closing	Actual Closing
09-Dec-2014	13-Feb-2015	17-Oct-2016	30-Jun-2018	31-Dec-2019

RESTRUCTURING AND/OR ADDITIONAL FINANCING

Date(s)	Amount Disbursed (US$M)	Key Revisions
14-Jun-2018	4.75	Change in Loan Closing Date(s) Reallocation between Disbursement Categories

KEY RATINGS

Outcome	Bank Performance	M&E Quality
Moderately Satisfactory	Moderately Satisfactory	Modest

RATINGS OF PROJECT PERFORMANCE IN ISRs

No.	Date ISR Archived	DO Rating	IP Rating	Actual Disbursements (US$M)
01	17-Jun-2015	Satisfactory	Satisfactory	0

02	09-Sep-2015	Satisfactory	Satisfactory	0
03	23-Mar-2016	Satisfactory	Moderately Satisfactory	0
04	08-Oct-2016	Satisfactory	Moderately Satisfactory	1.04
05	26-Apr-2017	Satisfactory	Moderately Satisfactory	1.88
06	14-Nov-2017	Moderately Satisfactory	Moderately Unsatisfactory	1.98
07	01-Jun-2018	Moderately Satisfactory	Moderately Satisfactory	4.75
08	29-Oct-2018	Moderately Satisfactory	Moderately Satisfactory	4.75
09	29-May-2019	Moderately Satisfactory	Moderately Satisfactory	4.89

SECTORS AND THEMES

Sectors

Major Sector/Sector	(%)
Agriculture, Fishing and Forestry	**100**
Fisheries	2
Livestock	46
Other Agriculture, Fishing and Forestry	52

Themes

Major Theme/ Theme (Level 2)/ Theme (Level 3)	(%)
Private Sector Development	**100**
Jobs	100
Finance	**25**
Finance for Development	25
Disaster Risk Finance	25

Urban and Rural Development	**75**
Disaster Risk Management	75
Disaster Response and Recovery	25
Disaster Risk Reduction	25
Disaster Preparedness	25

ADM STAFF

Role	At Approval	At ICR
Vice President:	Philippe H. Le Houerou	Hartwig Schafer
Country Director:	Onno Ruhl	Junaid Kamal Ahmad
Director:	Martien Van Nieuwkoop	John A. Roome
Practice Manager/Manager:	Shobha Shetty	Mary Kathryn Hollifield
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I. PROJECT CONTEXT AND DEVELOPMENT OBJECTIVES

A. CONTEXT AT APPRAISAL

Context

Country context

1. At appraisal (in March 2014), India had a large population of rural poor who were dependent on farming for their livelihood. The rural poverty rate was 25.7 percent and agriculture accounted for 72 percent of India's rural workforce. As these farmers relied on natural resources (such as rainfall, fodder and water bodies), any climatic hazards that affected the availability of these natural resources, adversely affected their livelihoods[1].

2. Climate change projections for 2100, estimated a 2–4°C increase in temperature, and concomitant worsening of variability of monsoons, frequency of extreme precipitation events and drought periods. Over the next three decades, a 1.25°C temperature increase could lead to a 6–11 percent decline in per capita consumption among rural households due to a 17–37 percent reduction in land productivity. By 2040, the rural poverty rate in India would increase by 3–4 percent due to climate change[2]. Given this scenario, climate change adaptation (CCA) practices could reduce the risks due to climate change by up to half[3], and improved adaptive capacity[4] of the rural poor engaged in farm livelihoods could help them cope with climate variability and change. However, the adoption rates of these practices were low[5].

National priorities

3. The Government of India (GoI), recognizing the urgent need to enable farmers to withstand the effects of climate change[6], included adaptation to climate change (especially of the poor and the vulnerable) as a priority in India's National Action Plan on Climate Change (NAPCC) and its component missions leading to the launch of CCA initiatives. For farm-based livelihoods, the GoI constituted the National Mission for Sustainable Agriculture (NMSA) within the Ministry of Agriculture. The NMSA *inter alia* focused on research and development, technologies, practices and capacity building in climate resilient agriculture. GoI's Indian Council of Agricultural Research (ICAR) launched the National Initiative on Climate Resilient Agriculture (NICRA) in 2011 – a network of institutions working to enhance farmers' climate resilience – that is focused on research, technology demonstration and capacity building.

4. However, these initiatives had limitations, as both NMSA and NICRA implemented innovative pilots on farmers' fields with no specific focus on scale-up. They sought to address *adaptation gap*[7] issues over those of *adaptation deficit*[8]. It is well-established that the extent of vulnerability to climate change often stems from the extent of underlying poverty, which is a result of adaptation deficit (refer to Figure A6.1 in Annex 6).

[1] Rural Development Statistics 2011-12. National Institute of Rural Development, Government of India.
[2] Press Note on Poverty Estimates, 2011-12. Planning Commission, Government of India. July 2013.
[3] Jacoby H., M. Rabassa, and E. Skoufias. Distributional Implications of Climate Change in India. 2011. World Bank Policy Research Working Paper 5623.
[4] Adaptive capacity refers to "the whole of capabilities, resources and institutions to implement effective adaptation measures".
[5] Climate Change Impacts in Drought and Flood Affected Areas: Case Studies in India. 2008. The World Bank. Report #43946-IN.
[6] Approach Paper to India's Twelfth Five Year Plan (2012–17).
[7] Adaptation gap is where the difference between the beneficiaries' status and the status appropriate to a changing climate is due solely to a failure to specifically address the effects of climate change. Source: Making Adaptation Count – Concepts and Options for Monitoring and Evaluation of Climate Change Adaptation. GIZ, World Resources Institute. 2011.
[8] Adaptation deficit is where the difference between the beneficiaries' status and the status appropriate to a changing climate is due to broader unmet development needs, and not only to a failure to address climate change. Source: Making Adaptation Count – Concepts and Options for Monitoring and Evaluation of Climate Change Adaptation. GIZ, World Resources Institute. 2011.

Context of rural livelihoods

5. GoI's National Rural Livelihoods Mission (NRLM) implemented by the Ministry of Rural Development (MoRD) was (and is) a large-scale[9] rural development program for poverty reduction and livelihoods enhancement. In convergence with other programs, NRLM provides integrated livelihoods support (such as institution building, farm livelihoods, provision of credit) through a large network of women-run community-based institutions (self-help groups (SHGs) and village organizations[10] (VOs)). World Bank's financing to NRLM of US$1 billion through the National Rural Livelihoods Project (NRLP[11]) became effective in 2011, and included the states of Bihar and Madhya Pradesh. NRLM sought to address adaptation deficit issues but did not have a systematic approach to assess and address climate change risks (the adaptation gap) or build long-term resilience. In this context, the GoI sought the Special Climate Change Funds (SCCFs) through the Global Environment Facility (GEF) to implement the Sustainable Livelihoods and Adaptation to Climate Change (SLACC) project to deal with adaptation gap and deficit issues.

Rationale for bank assistance

6. The SLACC project sought to complement and supplement national priorities by: (i) supporting the implementation of adaptation priorities of the NAPCC by integrating CCAs with farm livelihood activities of the NRLM and focusing on both adaptation gap and deficit issues; (ii) including technology and capacity building of community resources persons (CRPs) and project staff in CCA; and (iii) contributing to the CCA policy dialogue.

7. The project sought to leverage the NRLM's large network of community-run institutions for outreach to farmers. It sought to pilot-test a proof-of-concept of adding a climate resilience[12] layer to livelihoods support activities of the NRLM in two well performing states (Bihar and Madhya Pradesh), gather learnings and develop operational guidelines for future scale-up.

8. The project sought to contribute to the objectives of the Country Partnership Strategy (CPS) for India (2013–17) including that of reducing poverty, increasing shared prosperity as well as increasing productivity through climate-resilient agriculture, which is an operational business line under Outcome 2.4. Specific areas in the latter are: (i) inclusive agricultural and rural growth; (ii) technology development and climate-resilient agriculture; and (iii) water and natural resources management. The project sought to contribute to Millennium Development Goal 7 on environmental sustainability. The project was also aligned with state action plans of Bihar and Madhya Pradesh on climate change and with the District Agriculture Contingency Plans (refer to Relevance section for details).

Theory of Change (Results Chain)

9. The project appraisal document (PAD) did not have a Theory of Change as it was not mandated at appraisal. The following Theory of Change diagram (see next page) presents the project's underlying logic (also refer to Figure A6.1 in Annex 6).

Project Development Objectives

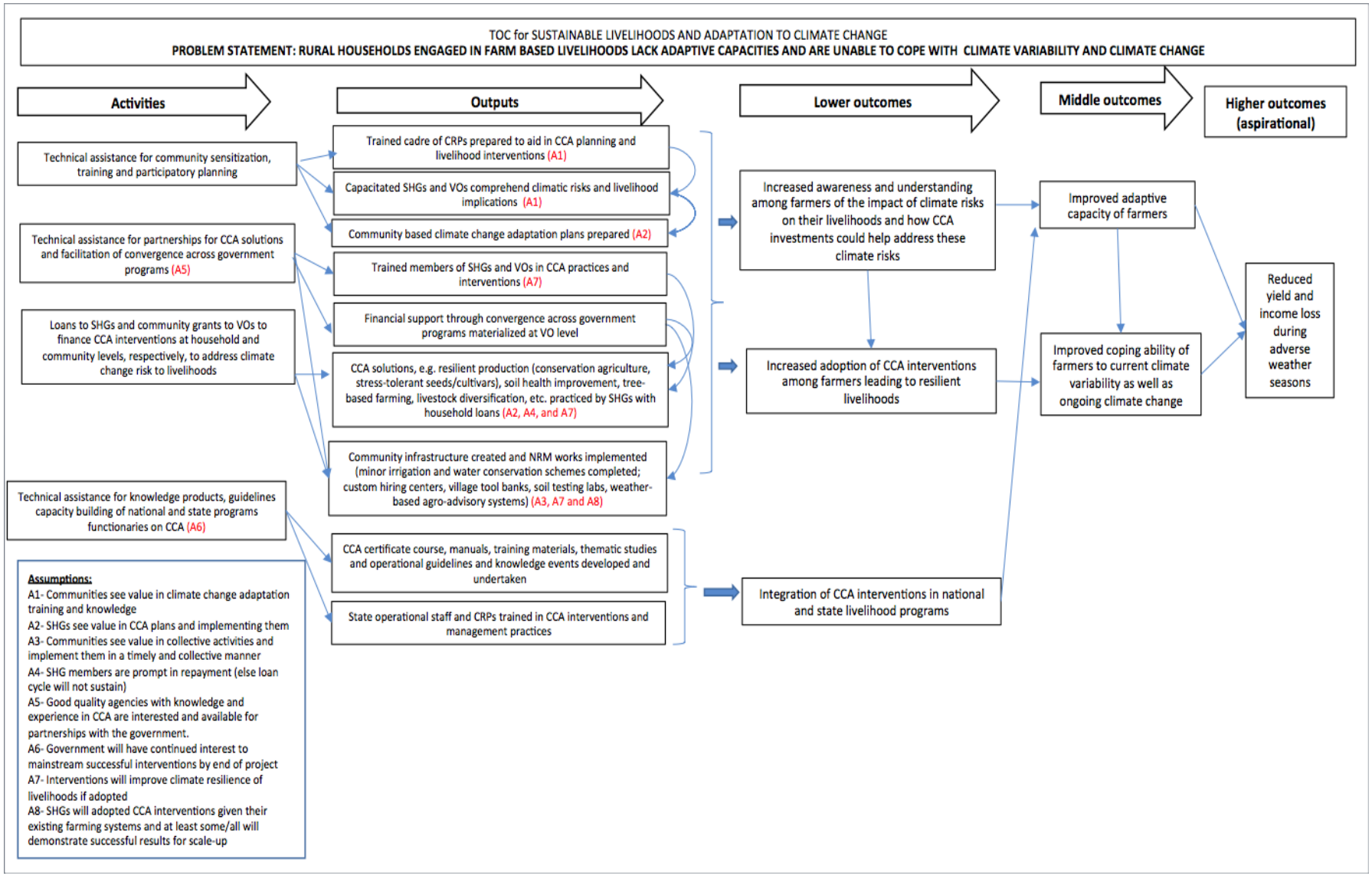
10. As per the legal agreement, "The Project Development Objective (PDO) is to improve adaptive capacity of the rural poor engaged in farm livelihoods to cope with climate variability and change." There was no material difference between this version and the version in the PAD.

[9] NRLM has an objective to support the livelihoods of 70 million rural poor households, across 600 districts, 6,000 blocks, 2.5 lakh gram panchayats and 6 lakh villages over 8 to 10 years.

[10] VO is the village level apex body for SHGs. SHGs are small collectives of women through which NRLM interventions are provided.

[11] NRLP IDA - Credit# 49780.

[12] The ability of a system and its component parts to anticipate, absorb and accommodate or recover from the effects of a hazardous event in a timely and efficient manner including through the preservation, restoration and improvement of its essential basis structures and functions. Source: IPCC 2012.


TOC for SUSTAINABLE LIVELIHOODS AND ADAPTATION TO CLIMATE CHANGE
PROBLEM STATEMENT: RURAL HOUSEHOLDS ENGAGED IN FARM BASED LIVELIHOODS LACK ADAPTIVE CAPACITIES AND ARE UNABLE TO COPE WITH CLIMATE VARIABILITY AND CLIMATE CHANGE
Activities
Outputs
Lower outcomes
Middle outcomes
Higher outcomes (aspirational)
Technical assistance for community sensitization, training and participatory planning
Technical assistance for partnerships for CCA solutions and facilitation of convergence across government programs (A5)
Loans to SHGs and community grants to VOs to finance CCA interventions at household and community levels, respectively, to address climate change risk to livelihoods
Technical assistance for knowledge products, guidelines capacity building of national and state programs functionaries on CCA (A6)
Trained cadre of CRPs prepared to aid in CCA planning and livelihood interventions (A1)
Capacitated SHGs and VOs comprehend climatic risks and livelihood implications (A1)
Community based climate change adaptation plans prepared (A2)
Trained members of SHGs and VOs in CCA practices and interventions (A7)
Financial support through convergence across government programs materialized at VO level
CCA solutions, e.g. resilient production (conservation agriculture, stress-tolerant seeds/cultivars), soil health improvement, tree-based farming, livestock diversification, etc. practiced by SHGs with household loans (A2, A4, and A7)
Community infrastructure created and NRM works implemented (minor irrigation and water conservation schemes completed; custom hiring centers, village tool banks, soil testing labs, weather-based agro-advisory systems) (A3, A7 and A8)
CCA certificate course, manuals, training materials, thematic studies and operational guidelines and knowledge events developed and undertaken
State operational staff and CRPs trained in CCA interventions and management practices
Increased awareness and understanding among farmers of the impact of climate risks on their livelihoods and how CCA investments could help address these climate risks
Increased adoption of CCA interventions among farmers leading to resilient livelihoods
Integration of CCA interventions in national and state livelihood programs
Improved adaptive capacity of farmers
Improved coping ability of farmers to current climate variability as well as ongoing climate change
Reduced yield and income loss during adverse weather seasons
Assumptions:
A1- Communities see value in climate change adaptation training and knowledge
A2- SHGs see value in CCA plans and implementing them
A3- Communities see value in collective activities and implement them in a timely and collective manner
A4- SHG members are prompt in repayment (else loan cycle will not sustain)
A5- Good quality agencies with knowledge and experience in CCA are interested and available for partnerships with the government.
A6- Government will have continued interest to mainstream successful interventions by end of project
A7- Interventions will improve climate resilience of livelihoods if adopted
A8- SHGs will adopted CCA interventions given their existing farming systems and at least some/all will demonstrate successful results for scale-up

Key Expected Outcomes and Outcome Indicators

Key outcomes and associated PDO indicators

- Poor farmer households have improved adaptive capacity to cope with climate variability and change.
  - At least 50 percent of the targeted households demonstrate strengthened awareness and ownership of adaptation and climate change risk reduction processes/measures.
- Poor farmer households adopted adaptation measures to cope with climate variability and change.
  - At least 50 percent of the targeted households adopt livelihoods with enhanced climate resilience.

11. The primary beneficiaries were women farmers (original target of 8,000; after restructuring 32,120 farmers were reached) and their household members who were existing members of SHGs promoted by the NRLM in 200 villages (793 villages were reached by the end of the project) in eight blocks in four drought- or flood-prone districts in Bihar and Madhya Pradesh. All NRLM SHG members belonging to the low income category, were eligible to participate in the project. CRPs and staff of State Rural Livelihoods Missions (SRLMs) benefited through training and improved knowledge of CCA.

Components

12. Component 1: Planning, service provision and implementation of CCA (budget at appraisal: US$8.27 million; cost at completion: US$5.61 million). Support community-based planning, service provision, implementation and monitoring of CCA interventions through inter alia: (i) community-led risk assessment, participatory planning of CCA interventions and preparation of CCA plans; (ii) provision of technical support for strategic CCA services; and (iii) community-based implementation of CCA interventions. The key outcomes are: (i) strengthened awareness and understanding of climate change risks and adaptation interventions leading to improved adaptive capacities; and (ii) climate adaptation measures adopted by community institutions for enhancing resilience and coping with current climate variability, as well as ongoing climate change.

13. Component 2: Scaling and mainstreaming community-based CCA (budget at appraisal: US$1.48 million; cost at completion: US$1.32 million). Building capacity of NRLM staff and CRPs for the implementation of CCA interventions and developing a strategy for scaling up, through inter alia (i) training on CCA and creation of a cadre of persons skilled in community-based CCA planning; (ii) building a knowledge support system for scaling up CCA including: (a) the development of knowledge products; (b) the establishment of a consortium of resource organizations on CCA; (c) developing a cadre of trained climate smart CRPs; and (d) the development of policy inputs for scaling up the community-based CCA approach within the recipient's national program on rural livelihoods. Key outcomes are: (i) strengthened operational capacity of national and state staff for integrating climate adaptation into livelihood support activities; and (ii) mainstreaming CCA into national and state livelihood programs.

14. Component 3: Project management and impact evaluation (budget at appraisal: US$0.42 million; cost at completion: US$0.25 million). Strengthening management units in existing or new national and state level institutional structures for project management, implementation support and coordination including: (i) establishment of CCA units within the National Mission Management Unit (NMMU) and the State Mission Management Units (SMMUs) of the participating states; (ii) support to fiduciary and safeguards management; and (iii) establishment of a monitoring system and evaluation arrangements. The outcome is efficient and effective management of other components.

B. SIGNIFICANT CHANGES DURING IMPLEMENTATION (IF APPLICABLE)

15. The project underwent one Level II restructuring on 14 June 2018 which involved an 18-month extension of the closing date from 30 June 2018 to 31 December 2019, reallocation across disbursement categories and amendments to

the Results Framework (RF)[13].

Revised PDO and PDO Indicators Outcome Targets

16. The PDO and PDO indicators were not altered. The overall outreach was increased due to an increase in the number of project villages. A major goal of the restructuring was to scale up promising interventions in new villages[14] within the original blocks and districts[15]. Moreover, minor changes were made to the intermediate indicators (Table 1).

Table 1: Amendments to the intermediate indicators

Original	Amended version
Component 1 Indicator 1: At least 8,000 farmers demonstrate climate resilient farming practices.	New target: 12,300.
Component 2 Indicator 1: At least 800 VOs/SHGs and CRPs are trained in adaptation-related technologies.	At least 6,000[16] SHG members are trained in adaptation-related technologies. Note: This indicator actually refers to members not groups, since the project did not reach out to that many groups. Training of CRPs is covered under another indicator.
–	A Project Management Information System (PMIS) is functional and used to review the extent of adoption of various interventions by farmers.
Component 1: Indicator 2: At least 30 percent of the community institutions access technical and/or financial support for climate adaptation plans through convergence with government programs.	At least 30 percent of the community institutions in resource villages[17] access financial support for climate adaptation plans through convergence with government programs. Note: This indicator was amended to specifically refer to 200 original villages since the project did not plan for convergence in the scale-up villages. Further, the scope of convergence was limited to financial support from government programs.
Component 2: Indicator 2: State level resource agencies and/or technical services providers for providing field level technical support, appointed and operational.	New target: 8 (details in Annex 1).
A climate resilience index was to be used to measure PDO indicator 1.	The index was defined to be a minimum set of practices (detailed in the efficacy section) a farmer had to adopt to be termed climate resilient.

[13] Changes to Project Monitoring Indicators did not get captured in the ICRR datasheet but these are documented in the amendment to the project legal agreementcommunicated to GoI.
[14] As per the Minutes of SLACC Review meeting held on 22 December 2017, issued by the MoRD and attended by SRLMs, scale-up villages were: 337 additional villages in Bihar and 150 in Madhya Pradesh in the original 8 blocks. New villages in Bihar were to launch the Community Investment Fund, set up Custom Hiring Centers and conduct demonstration of climate smart agricultural practices.
[15] The PAD refers to 100 resource plus 100 expansion villages. These 200 will henceforth be referred to as “original” villages; villages subsequently added at restructuring will be called “scale-up” villages.
[16] 6,000 SHG members were estimated across 200 original villages and 487 scale-up villages assuming an average of about 10 members per VO and rounding off.
[17] Each state had 100 resource villages for a total of 200 originally. At restructuring scale-up villages were added.

Revised Components

17. A primary change, reflected in the amended legal agreement, was the scale-up of successful interventions to 487 additional "scale-up" villages[18] in Component 1.

Changes to components

18. N/A

Other Changes

19. While the project's grant amount in US Dollar terms was not changed[19], outlay to the MoRD was reduced by US$0.48[20] million and the outlay to the states increased by the same amount. This implied a reallocation to the two disbursement categories in the legal agreement. The state governments' contributions increased by US$2.5 million for reasons explained below.

20. Changes to cost allocations of components during restructuring are given in Table 2.

Table 2: Changes to component-wise cost allocations at restructuring (US$ million)

Component name	Original cost	Cost at restructuring	Change in allocation	Final costs
Planning, service provision and implementation of climate change adaptation	6.20	6.68	Revised	5.61
Scaling and mainstreaming community-based climate adaptation	1.48	1.00	Revised	1.32
Project management and impact evaluation	0.32	0.32	No change	0.25
Total (Special Climate Change Fund (SCCF)/Global Environment Facility (GEF), does not include borrower contribution)	**8.0**	**8.0**		**7.18**

Rationale for Changes and their Implications on the Original Theory of Change

21. **Rationale for restructuring:** As per the original Grant Agreement, the total grant amount to the center was US$8 million, of which US$1.5 million was for use by the NMMU, and US$6.5 million was to be transferred by the MoRD to the two SMMUs. At appraisal, each state's own mandatory contribution was 25 percent of the transfer amount. Subsequently, a GoI policy change increased the mandatory state contribution to 40 percent[21] of the transfer amount, which combined with the US Dollar appreciating from an exchange rate of INR 60 to INR 62, led to US$2.5 million extra funds becoming available. The MoRD requested an extension of 18 months to use the extra funds to strengthen the work in the original villages, to scale up to newer villages, allow for better convergence, prepare training materials for future scale-up, and to assess the results and learning for dissemination[22]. The SRLMs also sought to expand their geographical coverage due to promising results achieved at the time[23]. These interventions did not alter the Theory of Change.

[18] Ibid., 9.
[19] Restructuring paper #RES32185 explains details.
[20] Minor rounding off deviations is possible.
[21] MoRD restructuring request letter to DEA.
[22] Ibid.
[23] Minutes of SLACC Review meeting held on 22 December 2017, issued by the MoRD and attended by SRLMs.

Table 3: Amendments to the project financing plan[24]

	Budget at appraisal (US$ million)	Budget at restructuring (US$ million)
To MoRD	1.5	1
Center to states transfer	6.5	7
State contributions	2.17	4.67
Total budget	**10.17**	**12.67**

II. OUTCOME

A. RELEVANCE OF PDOs

Assessment of Relevance of PDOs and Rating

22. **The project was closely aligned with the World Bank's Country Partnership Framework (CPF) for 2018–22** (Report 126667-IN)**.** Table 4 below lists all the intervention areas in the CPF related to climate-resilient farming and the interventions and outreach achieved by this project.[25]

Table 4: Intervention areas in the CPF related to climate-resilient farming

Reference in CPF	SLACC project achievement
Focus area 1: Resource Efficient Growth's Objective 1.1: Deepen support for climate resilience and improved natural resource management through investments in infrastructure, facilitating changes in agricultural approaches, crop diversification and minimizing agriculture risks through insurance	Infrastructure: 113 micro-irrigation schemes, 605 Custom Hiring Centers (CHCs), and 10 soil testing laboratories) Agricultural approaches: 32,120 farmers Crop diversification: 14,796 farmers Cattle insurance: 1,161 farmers
Prioritize operations that contribute to CCA and adopt climate resilient agricultural practices	The main objective of the project
Support GoI and states inter alia in capacity building to promote climate smart agriculture	Capacity building of 8,218 farmers, CRPs and project staff
List of states include Bihar and Madhya Pradesh	The two project states
Support irrigation and drainage services and efficiency in water to improve the sustainability of agricultural growth and climate change resilience	4,880 farmers
Milestone 1.1.1: Number of water users provided with new/improved irrigation and drainage services	4,880 farmers
Milestone 1.1.3: Number of farmers adopting improved agricultural technology	19,202 farmers
Milestone 1.1.4: Number of farmers reached with additional productive assets or services	32,120 farmers

23. **Alignment with several GoI priorities:** The project continues to be relevant to the GoI policy on climate change (i.e. NAPCC) and aligned with its specific initiatives – NICRA and NMSA – with the objective to make agriculture productive and resilient, conserve national resources and adopt soil health management practices. The project is aligned with the

[24] MoRD restructuring request to DEA, seeking extension of project for 18 months, 19 March 2018.
[25] Refer to the RF in Annex 1 for sources and details of these figures. Additional source, SRLM progress reports.

Pradhan Mantri Krishi Sinchayee Yojana program[26] to increase the farm area under irrigation, to improve water use efficiency and to use GoI's National Soil Health Card scheme[27] for testing soil nutrient deficiencies and recommending remedial actions. The project CHCs are aligned with the Ministry of Agriculture's sub-mission on agricultural mechanization[28].

24. **Alignment with state government priorities:** The project is aligned with state action plans of Bihar and Madhya Pradesh on climate change[29] with their focus on agriculture, water resources and rural development. The project is also aligned with the District Agriculture Contingency Plans[30] led by the agriculture departments in both the states that inform farming communities about technological interventions to manage the impact of weather aberrations on agriculture.

Rating and justification

Rating: High

25. **Justification:** Complete alignment with climate resilient farm interventions as per the CPF and high alignment with national and state policies and programs on climate resilient agriculture and allied programs.

B. ACHIEVEMENT OF PDOs (EFFICACY)

Assessment of Achievement of Each Objective/Outcome

26. **PDO:** To improve the adaptive capacity of the rural poor engaged in farm livelihoods to cope with climate variability and change.

Outcomes

- Improved adaptive capacity of poor rural farmers engaged in farm livelihoods.
- Poor rural farmer households took measures to cope with climate variability and change.

Methodology for assessment

27. Beneficiaries. The project had an outreach of 32,120[31] farmer households (as per the restructuring) in 793 villages (compared to 687 villages planned). This included 8,650 from the 200 original villages and 23,470 farmer households in the 593 scale-up villages. The key outcome indicators and supporting data are based on the findings of the program-end performance evaluation[32]. Outcomes are measured at the "middle outcomes" level in the Theory of Change[33]. The evaluation included a representative survey (in late 2019) of 1,583 participating farmer households in the original villages and 120 households in the scale-up villages for a total of 1,703 farmer respondents. PDO indicators 1 and 2 below are weighted for the population outreach figures in original and scale-up villages. The source of the supporting outcome indicators is the Program Evaluation Report and author's calculations using that data, unless otherwise mentioned (see Annex 1).

[26] https://pmksy.gov.in/
[27] https://www.india.gov.in/spotlight/soil-health-card
[28] http://agricoop.nic.in/divisiontype/mechanization-and-technology
[29] http://forest.bih.nic.in/Docs/SAPCC%20Final%20Draft%2011-09-2015%20(Part%20A,%20B%20and%20C).pdf and http://www.climatechange.mp.gov.in/sites/default/files/resources/Jogesh%20%26%20Dubash_mainstreaming%20climate%20in%20state%20planning_MP%20Climate%20Plan_FEB%202014.pdf
[30] http://www.crida.in/DACP%20brochure%202016.pdf
[31] The total outreach figure is from the Program Evaluation Report. Minor discrepancies in outreach figures are observed in the project data as per the SRLM progress reports.
[32] Refers to 593 villages added after restructuring to scale up selected interventions.
[33] Refer to Annex 4, methodology section for elaboration of technical challenges.

28. **The project achieved high inclusivity of the rural poor*:*** Of the total farmer households, 57 percent belonged to the scheduled caste or scheduled tribe communities; 82 percent were small to marginal landholders (with less than two hectares of land); 35 percent were landless; 66 percent had a Below Poverty Line card; and 18 percent belonged to Primitive Vulnerable Tribe Groups. All of the above are indicators of being poor. Ninety-seven percent of the project farmers belonged to at least one of the above categories, thereby supporting the objective as per the PDO to reach out to the "rural poor".

Achievement of the project development objectives

29. **PDO 1: Improved adaptive capacity of the rural poor engaged in farm livelihoods to cope with climate variability and change** (**Rating: Substantial**). The definition of improved adaptive capacity was that a farmer should (i) have demonstrated knowledge of climatic risks, their impacts on livelihoods and the interventions that would help in adaptation (measured through a test in the end-term survey); (ii) be trained in adaptation interventions and/or participated in Climate Change Adaptation Plan (CCAP) meetings; and (iii) have adopted and/or be willing to adopt at least two interventions in the future. Against the RF target of 50 percent, the project achieved 50.7 percent (which translates to 16,282 of the total outreach to 32,120 farmers).

30. Sensitivity analysis on PDO 1: The sample size of respondents in the scale-up villages was only 120 and hence there is a margin of error of around 13 percent[34] in the estimate of the percentage of farmers that achieved PDO 1 in the scale-up villages. However, even if the estimated value is subtracted by half this margin of error[35] of achievements in the scale-up villages (i.e. subtracting 6.5 percent), the overall achievement is 45.9 percent against the target of 50 percent (refer to section on Risks to Development Outcomes for further discussion on future adoption plans).

31. **The project outputs that contributed to the achievement of PDO 1 are elaborated in the following paragraphs**. Taken together, they enabled farmers to understand climate risks to their livelihoods, how the project's interventions could help address them and provided the capability, resources and community-based institutions to adopt adaptation measures during the project period and in the future.

32. CCAPs were prepared: CRPs, staff and experts conducted CCAPs in all 793 villages jointly with the community to educate, identify and prioritize climatic risks to livelihoods. The MoRD recognized CCAP as an important climate change planning tool and expressed intent to mainstream it in the planning efforts of farm-based livelihoods in the NRLM. The CCAP informed the design of the CCA interventions and further supported their adoption by farmers through the CCA grants provided to VOs to lend to farmers to adopt CCA practices.

33. CRPs and SRLM staff were trained to enable farmers to adopt climate resilient practices**:** A total of 1,736 – comprising 1,247 CRPs and 489 SRLM staff in 793 project villages in two states[36] – were given continuous training on the various interventions (listed in the achievement of PDO 2 below) during the course of the project to in turn train and provide support to the farmers. The training — classified into inputs and production practices, knowledge and technology, ecological system support and financial services — was conducted by individual experts, resource institutions and agriculture universities. The training locations were residential, in classrooms, in the field, and included demonstrations and exposure visits. The knowledge levels of those trained were tested and found to be adequate for supporting farmers' interventions[37]. In addition, the National Institute of Rural Development and Panchayati Raj (NIRD&PR) conducted a comprehensive certificate course for 200 staff and 400 CRPs on CCAs in 2019 in project and non-project areas of the two SRLMs. This achievement was considerably higher (579 percent) than the RF target of 300.

[34] Author's estimates based on sample standard deviation computed from sample mean of 44.4 percent in scale-up villages, intra-cluster correlation of 0.08, 95 percent confidence interval, with 15 respondents each in 8 sample villages.
[35] Since the probability of the true population value being at least 6 percent less than the sample estimate is low, at about 25 percent.
[36] Program evaluation report based on data provided by the SRLMs.
[37] Program evaluation report.

It was substantially higher (177 percent) than the actual higher envisaged target for the trained cadre of 980 detailed in the PAD[38]. In addition, 32,642 SHG members (including 522 non-project farmers) were given some form of training in climate resilient farming. Of these, 6,842 SHG members were given a complete set of training in adaptation-related technologies against a target of 6,000. Finally, 19,376 CRPs and project farmers were taken on exposure visits.

34. Communities were partnered with technical support agencies to obtain climate adaptation solutions**:** Against a target of eight, 25 resource agencies were engaged by the MoRD and the two SRLMs in addition to individual experts. This enabled transfer of climate-resilient practices, advisories, training and inputs from technical institutes, non-government organizations (NGOs) and agriculture universities to farmers who had little formal training on these practices prior to the project[39]. Selected agencies included: Cropin Technologies and Skymet Weather for providing weather forecast-based crop advisories through a first-of-a-kind public–private partnership; Borlaug Institute for South Asia for heat tolerant seeds; International Water Management Institute for irrigation systems; ICAR and state agriculture universities for training. It is expected that knowledge transfer from some of these institutions to farmers will continue beyond the project period[40] to enable them to cope with new climate risks.

35. Financial support was provided and convergence with government programs was facilitated for farmers to have financial capacity to implement CCA measures: (i) CCA grants were provided to all 793 VOs at the rate of INR 0.41 million (US$5,764) per VO. VOs provided loans (of INR 0.20 million value) out of these grants to their members to implement CCA measures on the farm; (ii) Convergence support was for seeds procurement, input subsidies, setting up CHCs (for renting farm machinery and tools, plant protection tools), tree planting, pest surveillance training, soil testing, solar irrigation, crop insurance and livestock health management. Converging departments included that of agriculture, horticulture, animal husbandry, Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS), fishery, irrigation, forestry, tribal development, among others. The total value of the financial support through convergence was INR 463.6 million covering 175,776 farmer households. Thus, against a target of 30 percent of VOs leveraging financial support from convergence, achievement was 76 percent among the 200 original villages.

Table 5: Financial support[41]

Output	Total	Bihar	Madhya Pradesh
CCA plans and support			
Number of VOs that developed CCAPs and were provided CCAP grants	793	383	410
Average amount of CCA grant provided per VO (INR)	410,652	NA	NA
Average amount of loans (for agriculture activities) per VO (INR)	203,297	NA	NA
Convergence support			
Number of households who received technical or financial benefits through convergence or non-government sources	175,776	163,883	11,893
Amount of convergence funding obtained (INR million)	466.13	196.34	269.79
Number of schemes/agencies with which convergence was undertaken	30	18	12
Number (and %) of VOs that benefitted from convergence funding	647 (82%)	317	330

36. Infrastructure run by community institutions was set up to provide technological and ecological services to enable adoption by farmers**:** The project installed field instruments to enable provisioning of weather forecast based advisories; set up community-run soil testing laboratories to test and recommend soil nutrient improvements; and set up community managed micro-irrigation schemes and CHCs to rent out farm implements (refer to Annex 2 for a detailed

[38] PAD pages 54-55 plans training of 80 staff and 200 CRPs in original and 300 plus 400 in scale-up villages for a total of 980.
[39] SLACC mid-term performance evaluation report. 2018. Taru Leading Edge.
[40] Interview with Madhya Pradesh SRLM.
[41] Bihar Progress Report, Madhya Pradesh Consolidated Report, Project Completion Report and project convergence data.

list of project outputs).

Table 6: Community infrastructure and farmer interventions

Community infrastructure and farmer outreach outputs
200 Automated weather stations and automated rain gauges installed to serve 8,704 farmers with weather forecast based advisories
605 CHCs used by 13,884 farmers for hiring farm implements
10 Soil testing laboratories set up to provide soil testing services to 8,119 farmers
113 Micro-irrigation schemes set up to support 4,880 farmers with improved irrigation facilities

37. Successful interventions were mainstreamed into the NRLM to support adaptive capacity of existing and new farmers to cope with ongoing climate change: SRLM officials provided strong positive feedback, during interviews, of learning new or improved climate adaptation measures (soil testing, non-pesticide management, zero tillage, weather advisories). The Bihar Rural Livelihoods Promotion Society (BRLPS) intends to scale up selected climate resilient crop production interventions, and has been given the responsibility to set up 27 community-run soil test laboratories[42] by the Department of Agriculture based on its learnings from this project. The project's community-managed CHCs[43] are among the first to be promoted by the Bihar SRLM which has received a mandate from the Department of Agriculture, Government of Bihar, to expand CHCs in the state. This implicitly has the buy-in of the community who will manage these services. The MoRD intends[44] to use the project's training materials in future farm livelihood training programs for CRPs in climate stressed areas. The MoRD is considering introducing weather forecast-based crop advisories into the NRLM, the Climate Change Adaptation Planning tool into its Village Livelihood Planning tool, and community-managed CCA funds. The NIRD&PR, the project's Lead Technical Support Agency (LTSA), is expanding its CCA training to another six states. It started a 12-week online course on CCA for CRPs, NRLM staff and NGOs through its e-learning portal[45]. The NIRD&PR has developed the curriculum for an elective SLACC course for its two-year Post Graduate Diploma in Rural Management. The MoRD and SRLMs organized three seminars and 16 knowledge products for knowledge sharing and to encourage collaboration among government departments and other stakeholders.

38. **PDO 2: Poor rural farmers adopted measures to cope with climate variability and change** (**Rating: Substantial**). The project defined "coping with climate variability and change" as a farmer adopting[46] any three of the following CCA practices (specific selected interventions were launched based on the location and the context of the farmer): (i) implemented soil management improvements; (ii) used weather forecast-based advisories to improve scheduling of production practices; (iii) used climate resilient seeds; (iv) used improved water conservation, harvesting and allied practices; (v) undertook new livelihood or crop diversification; (vi) used tools from the project's CHCs, (vii) borrowed loans from the Climate Change Adaptation Fund; (viii) used better livestock management, inputs and market linkages. In the absence of standardized and commonly accepted definitions of farmer's climate resilience the project's definition was used. Unfortunately one-third of the sample included landless project farmers who chose not to lease-in land during the recall period (2018-19) of the survey and hence did not cultivate traditional crops. The only recommended resilience intervention they were able to practice was diversification such as livestock or mushroom cultivation. About

[42] Which are part of GoI's National Soil Health Card scheme.
[43] CHCs rent out farm implement and tools to farmers.
[44] Interview with Joint Secretary, MoRD.
[45] http://gramswaraj.nirdpr.in/
[46] The baseline value of PDO indicators were set to zero by construction. The pre-project value of this indicator (adoption of any 3 indicators) is not known. However, based on discussion with SRLM staff and the low pre-project levels of adoption of project interventions measured through recall based questions in the mid-term survey, the value of this indicator is expected to be very low. No claims are being made about what the adoption rates would have been in the absence of the project.

32.6 percent of the landless farmers diversified their livelihoods. Altering the definition of enhanced resilience for landless farmers to include only livelihood diversification (our preferred measure of this indicator), showed achievement of 54.6 percent of the farmers (which can be extrapolated to 17,533 out of the 32,120 farmers reached out to). Applying the project's full definition showed enhanced livelihood resilience among 50.1 percent of the farmers against the target of 50 percent. Finally, counting project participants who only cultivated in at least one plot in the reference period of the survey, the achievement was 63.9 percent.

Table 7: PDO 2 achievements

Method of measurement	Percentage achievement
All sample farmers (landless and those who cultivated) using applicable definition of climate resilience for landless farmers	54.6%
All sample farmers (landless and those who cultivated) based on the full definition of climate resilience	50.1%
Only farmers who cultivated (the landed) based on full definition of climate resilience	63.9%

39. Sensitivity analysis on PDO 2: The sample size of respondents in the scale-up villages was only 120 and hence there is a margin of error of around 12 percent[47] in the estimate of the percentage of farmers that achieved this indicator in the scale-up villages. However, even if the estimated value is subtracted by half this margin of error of achievements in scale-up villages (i.e. subtracting 6 percent), the overall achievement is 50.3 percent.

40. **The following project outputs contributed to achievement of PDO 2:** (i) The improved adaptive capacity as described in detail along with PDO 1; (ii) The project helped in introducing coping measures to substantially more farmer households than originally planned: against the RF target of 12,300, 19,202 farmer households in 793 original and scale-up villages, adopted a core set of climate resilient agricultural practices out of the total project outreach of 32,120 farmer households. The core set was the adoption of any three of the following. In Bihar: Attended CCAP meetings and any two of the following: (i) undertook non-pesticide management; (ii) undertook livelihood diversification; (iii) used climate-resilient seeds; (iv) used weather forecast based advisories to schedule farm operations. In Madhya Pradesh: (i) undertook soil health improvement; (ii) used climate-resilient seeds; (iii) undertook one new livelihood source and/or strengthened existing livelihood; (iv) increased usage of livestock management; (v) adopted recommended production; (vi) utilized moisture conservation water harvesting, improved irrigation or drainage; (vii) cultivated Poshan Vatika (nurseries/kitchen garden); (viii) used weather forecast based advisories to schedule farm operations. Table 8 (see next page) presents the adoption rates of various interventions. The highest adoptions were in soil health management practices, livelihood diversification, irrigation and drainage facilities as well as weather forecast based advisories to schedule farm operations.

Justification of Overall Efficacy Rating

Rating: Substantial

41. **Justification:** The project achieved the target values of its two PDO outcomes which are rated Substantial, and individually exceeded targets in several intermediate indicators.

[47] Author's estimates based on sample standard deviation computed from sample mean of 72 percent in scale-up villages, intra-cluster correlation of 0.08, 95 percent confidence interval, with 15 respondents each in 8 sample villages.

Table 8: Detailed achievements in farmers' adoption of climate resilient practices

Madhya Pradesh			Bihar		
Criteria	**Achievement (%)**		**Criteria**	**Achievement (%)**	
Any three of the following:	**Original villages**	**Scale-up villages**	**Attended CCAP meeting plus any one of the following:**	**Original villages**	**Scale-up villages**
Undertook soil health improvement	57.8	30.0	Attended CCAP meeting	100	100
Used climate resilient seeds	46.3	83.3	Undertook non-pesticide management	35.6	35.0
Undertook one new livelihood source and/or strengthened existing livelihood	58.6	28.3	Undertook livelihood diversification	55.0	55.0
Increased usage of livestock management	3.9	1.7	Used climate-resilient seeds	68.4	53.3
Adopted recommended production	5.3	0.0	Used weather forecast based advisories to schedule farm operations	41.8	36.7
Utilized moisture conservation water harvesting, improved irrigation or drainage	61.1	55.0			
Cultivated Poshan Vatika (nurseries/kitchen garden)	0.4	0.0			
Used weather forecast based advisories to schedule farm operations	48.3	13.3			
Overall achievement (%)	**56.2**	**36.7**	**Overall achievement (%)**	**86.2**	**76.7**
Total project participants (number)	**4,650**	**12,150**	**Total project participants (number)**	**4,000**	**1,132 0**
Overall achievement for Madhya Pradesh (number)	**2,613**	**4,459**	**Overall achievement for Bihar (number)**	**3,448**	**8,682**
Overall achievement	**7,072 farmers in Madhya Pradesh and 12,130 in Bihar for a total of 19,202 farmers who adopted CCA practices.**				

C. EFFICIENCY

42. This section describes the results of the cost-effectiveness and operational/administrative efficiency analysis.

Cost-effectiveness analysis

43. In the absence of an ex-ante cost–benefit analysis for the project and due to the technical difficulties related to conducting an ex-post cost–benefit analysis of climate resilience projects, an ex-post cost-effectiveness analysis was conducted for the project. The cost per beneficiary at completion (US$354) was substantially lower than expected at appraisal (US$1,271) and at restructuring (US$1,030) because much higher outreach was achieved compared to the target. The cost per beneficiary of this project ranked in the middle of five similar completed Bank projects whose combined average was US$626. More importantly, the cost per beneficiary was better than the comparison project in Yemen (US$471) where efficiency was rated modest by the Independent Evaluation Group (IEG, P103922) due to low cost per beneficiary (see Annex 4 for details).

Operational efficiency

44. **Inefficiencies**

- Project preparation took 2.75 years from Project Identification Form clearance by the Bank and GEF in April 2012 to Board approval in December 2014[48].
- Trained non-project staff did not have an opportunity to apply their knowledge since a systematic scale-up plan was not in place.
- At project completion, the project had fully achieved or exceeded most PDO and intermediate indicators, despite the actual project cost (US$11.37 million) representing only 89.7 percent of amount estimated at restructuring (US$12.67 million). The project was unable to spend the full grant funding but rather relied on counterpart funding and convergence leveraged for its activities. The project spent only 89.8 percent (US$ 7.18 million) of the US$8 million grant. This was primarily due to slow expenditure of the grant at the center, where only 31.7 percent of the grant portion was utilized as compared to appraisal estimates. A key reason for the under-utilization of funds was that fund programming at the center was delayed and these expenditures were over-estimated.

45. **Efficiencies**

- The project was extended by 1.5 years for scaling up selected interventions in new villages. This was primarily because of the exchange rate savings and a change in procurement and financing rules of the GoI, which increased the overall project budget by 24.6 percent to US$12.7 million. The project extension helped the project increase its outreach substantially more than what could have been expected proportionately from the 1.5 years of extension.
- All compliance protocols and guidelines were taken from the NRLP, thereby avoiding costs of new preparation.
- Actual administrative cost (Component 3) at completion was 3.48 percent of the grant amount spent; lower than the 4.13 percent estimated at appraisal.
- Efficient procurement practices were used whereby the Bihar SRLM procured the LTSA, the weather forecast and the advisory providers on behalf of both SRLMs.
- The project leveraged convergence funds worth INR 463.6 million. Thus, against a target of 30 percent of VOs leveraging financial support from convergence, the achievement was 76 percent among the 200 original villages.
- The project contributed to the experiential learning of the Bihar SRLM, which enabled it to further scale up selected interventions. Potential future use of NIRD&PR and MoRD training materials is anticipated.

Assessment of Efficiency and Rating

Rating: Modest

46. **Justification:** Cost-effectiveness of the project was better than the sectoral average. The administrative costs fared better than planned, and the project was highly successful in leveraging convergence funds and future scale-ups of selected interventions have been planned. The 1.5-year extension led to a more than commensurate increase in outreach and hence was not a source of inefficiency. However, the rating was reduced since the complete trust fund was not used, due to the extended preparation period and early delays in implementation.

D. JUSTIFICATION OF OVERALL OUTCOME RATING

47. The overall rating is Moderately Satisfactory based on the rating of the three categories: Relevance – High, Efficacy – Substantial, and Efficiency – Modest.

[48] The estimated Board delivery date was March 2014 at Concept Note approval stage. Project preparation was completed in 25.5 staff weeks using SCCF Bank-executed trust fund of US$113,512.58 No Bank budget was used.

E. OTHER OUTCOMES AND IMPACTS (IF ANY)

Gender

48. The project worked solely through women-run community institutions of the NRLM. These institutions managed CCA grants, soil testing laboratories, CHCs as well as some irrigation schemes, and took management decisions such as of hiring CRPs. A total of 6,482 women farmers were the primary targets and points of interface to the households for all interventions. They received extensive training on climate-resilient production practices[49], many for the first time in their lives[50] which they adopted in their farms after[51], convincing the men farmers in the household about the benefits. They were given access to loans from the CCA grant for adopting interventions. They also directly hired and used tools and implements from the CHCs. These tools were partly selected to make tasks performed by women in the farm easier. A total of 630 VOs had ownership rights over community assets (such as 113 micro-irrigation schemes, 605 CHCs and 10 soil testing laboratories) and had established or were on their way to establish management options for them. Per the Program Evaluation Report, a large number of CRPs were women – 67 percent in Bihar and 15 percent in Madhya Pradesh[52]. They attended certificate courses for up to 20 days at a residential facility. CRP support played a critical role in enabling women farmers with low education levels to successfully understand and adopt weather forecast-based crop advisories delivered to them by SMS[53].

Institutional Strengthening

49. The SRLMs, during interviews, acknowledged that their staff had learned new interventions and how to implement several ones better (community-run soil testing laboratories, CHCs and production practices), enabling them to scale them up beyond the project. The MoRD reported improved capacities for training on CCAs and other project interventions. These were significant contributions of the project. The NIRD&PR[54] has improved capacities to deliver courses on CCA that it has planned for the future[55]. The NRLM's VOs[56] took on added responsibilities of CRP selection, on-lending CCA grants to SHG members, managing soil test laboratories and some CHCs, and in some cases worked directly with agricultural universities to receive technical advisory. Going forward, the Bihar SRLM has taken on the expansion of CHCs and community soil testing laboratories through financial convergence with state agriculture department programs.

Mobilizing Private Sector Financing

50. None

Poverty Reduction and Shared Prosperity

51. Inclusivity was designed as follows: (i) the project targeted SHG members of the NRLM who were recognized to belong to the poorer section of the villages; (ii) per the Program Evaluation Report, 97 percent of the project

[49] See Annex 2 for details.
[50] Mid-term evaluation report found very low levels of prior training received by project farmers.
[51] Program evaluation report.
[52] Program evaluation report.
[53] Weather-Based Agro-Advisory Services In The NRLM. A Case Study. 2019. K Krishnaswamy and SC Rajshekar.
[54] NIRD&PR, an autonomous organization under the MoRD, is the National Centre of Excellence in Rural Development and Panchayati Raj. it has the mandate to train department staff, NGOs and other stakeholders by training, research and consultancy.
[55] Refer to the efficacy section for details.
[56] Village-level apex body for the SHGs, responsible for lending from the Community Investment Fund to the SHGs in village.

beneficiaries belonged to disadvantaged groups; and (iii) the project's Social Management Framework[57] set in place measures for the inclusion of vulnerable groups (such as tribals, scheduled castes, smallholders) in stakeholder consultations, project planning and receipt of interventions. However, while there is no evidence of improved prosperity, the interventions were largely no-regret interventions that are expected to be beneficial.

Other Unintended Outcomes and Impacts

52. The project's final achievement of 19,202 farmers who adopted a core set of climate resilience interventions was substantially more than the target of 12,300 set during restructuring. This was due to scaling up of selected interventions to more villages than planned in the post-restructuring phase.

III. KEY FACTORS THAT AFFECTED IMPLEMENTATION AND OUTCOME

A. KEY FACTORS DURING PREPARATION

53. **Slow preparation:** The preparation process took just under three years. MoRD's constraints included: lower engagement due to the small size of the project, competing project priorities of restructuring the US$1 billion NRLP and lack of prior experience with GEF projects. Constraints at the Bank included the added complexity of complying with GEF and World Bank guidelines and added coordination with MoRD, SRLMs, Ministry of Environment, Forestry and Climate Change (MoEFCC) and DEA, and between the Bank teams (NRLP and SLACC)[58]. Moreover, time was lost because the original plan to embed the SLACC project through additional financing into the IDA-financed NRLP during its restructuring at mid-term was operationally difficult and did not materialize.

54. **Project design:** Project interventions were carefully thought out and benefitted from the Bank's large number of missions, learning visits by facilitating wide consultations and technical workshops with MoRD, SRLMs, technical experts, resource agencies and NGOs to learn from other initiatives and to design collaboratively. Thorough procedural clearances with multiple stakeholders and sound risk assessments were done. The overall risk at appraisal was moderate. Key risks of weak ownership and capacities in the national and state agencies and expected delays due to the new and innovative nature of the project were recognized. These risks were mitigated with extensive handholding support by the Bank in the initial years and also building upon successful climate adaptation models in the two best SRLMs in India and keeping the geographical scope limited so as to not spread resources thin. However, due to the technical complexity and exploratory nature of the project at appraisal, the definition of success of the PDO indicators or the precise scope of the operational guidelines and concomitant plans for the desired scale-up beyond the project period were not clearly defined (refer to the M&E section for further details).

55. **Government commitment:** The MoRD demonstrated commitment by successfully making the case to situate the project within the MoRD rather than the Ministry of Agriculture as it was keen to bring a climate lens into the NRLM. However, while the SRLMs were keen to embed climate resilience interventions into their livelihoods promotion activities, there were concerns about MoRD's attention to project management due to the small project size, insufficient mandate on climate resilience, exploratory nature of the project and competing attention of the larger NRLP.

56. **Readiness for implementation:** The project was ready for implementation as it had strong senior management, and a good governance mechanism at the MoRD and states from the parent NRLP. The National Lead Farm

[57] Social assessment and social management framework (Including Gender, Tribal and Vulnerable Community Development Strategy), 30 May 2014 (Report # IPP702 V2).
[58] Written report by World Bank Task Team member based on email communications.

Livelihoods Coordinator was designated as the National CCA Coordinator. However, a LTSA to design and support the interventions was not procured by the MoRD at preparation, even though "procurement at the earliest" was recommended by the World Bank in its Aide Memoire. This was not pressed further since the MoRD was focused on the delayed implementation of the NRLP. However, this had been identified as an operational risk[59] at appraisal. Further, the project did not have an implementation plan which is likely to have affected implementation.

B. KEY FACTORS DURING IMPLEMENTATION

57. **Factors within the government's control:** (i) The project made little progress in the first two years: Disbursements were at zero percent as of January 2016 and 25 percent as of August 2017 as compared to a projection of 56.25 percent by June 2017. The reasons cited for poor progress were delays in hiring state project teams and the LTSA, delays in fund releases to the states, and added efforts to educate the community about climate risks and the project's objectives before entrusting them with the grants. The LTSA was hired 1.5 years after the project effectiveness date in August 2016, a factor which prevented the CCAPs from being completed early to feed into the design of the interventions. (ii) Human resource challenges: Hiring good district staff such as the Young Professionals took longer than planned. This led to dedicated manpower being available only for 60 percent of the total ideal project-person-months. But once hired, staff performance especially that of Young Professionals was a success factor for effective implementation. In the absence of a dedicated coordinator for the project (which would have been preferable) by the MoRD, it was led by the Lead Farm Livelihoods Coordinator at the NMMU who had competing priorities. The first LTSA hired did not perform satisfactorily in Bihar and its performance in Madhya Pradesh picked up after over one year of engagement, which contributed to slow progress in the early stages. (iii) Government commitment: There was a perception[60] of low MoRD commitment at preparation and at early implementation stages (as explained earlier). However, by the end of the second year of implementation, government commitment at the national and state levels had improved considerably. The project was regularly reviewed by the Joint Secretary, MoRD and Chief Executive Officers (CEOs) of both SRLMs. (iv) Fiduciary issues[61]: There were delays in the collation and submission of Financial Management reports from the states as well as delays in fund releases to the state during the initial period, resulting in delayed start of implementation. (v) Disbursements: The final disbursement rate was 90 percent. The undisbursed amount was shared between the MoRD and the states. This was in part due to delayed fund programming at the center and over-estimation of these expenditures.

58. **Factors subject to the World Bank's control:** (i) Reporting: The World Bank consistently raised the issue of slow progress, and the need to hire a LTSA and other staff. The slow progress was reflected initially as "Moderately Unsatisfactory" in the fifth Implementation Status & Results Report (April 2018). (ii) Support: The World Bank provided extensive technical support through technical experts and facilitated technical consultations and workshops for implementation as well as monitoring and evaluation (M&E). Since the procurement of private sector agencies for agro-advisory was particularly challenging for the SRLMs, the Bank provided technical assistance in the preparation of the Terms of Reference and on procurement methods. (iii) Mid-term and endline evaluations were conducted in early 2018 and late 2019, respectively. (iv) Dialogue on restructuring was initiated by the Bank in a timely manner. However, it was delayed due to the DEA rules to restructure only after 60 percent of the funds had been spent.

[59] PAD Annex 4.
[60] Based on discussions with the Bank task team.
[61] World Bank Financial Management specialist.

IV. BANK PERFORMANCE, COMPLIANCE ISSUES, AND RISK TO DEVELOPMENT OUTCOME

A. QUALITY OF MONITORING AND EVALUATION

M&E Design

59. **M&E design had scope for improvement.** The definitions of PDO 1 and PDO 2 were made late in August 2018; hence there was a lack of clarity regarding the objectives on the part of the SRLMs. At appraisal, from a larger list, specific localized interventions were to be launched based on the context of specific farmers and villages. These interventions and hence the measurable definition of resilience were to be identified early in the project. Efforts to define a climate resilience index by engaging a mid-term evaluation agency in 2018 were not successful due to methodological complexity. The Bank finally facilitated the SRLMs in arriving at a definition, while the program-end evaluation agency arrived at an alternative definition, implying a lack of standardized methods to measure climate resilience. Moreover, the precise scope of the operational guidelines to be prepared for scale-up was not clearly defined. A baseline survey was not conducted since the SRLM teams were not fully staffed. However, retrospective pre-project values were collected through the mid-term survey[62]. The project had no digital Project Management Information System (PMIS), although it was mentioned in the PAD and explicitly added as an intermediate indicator during restructuring to monitor farmer level adoption of core climate resilience practices[63]. A qualified agency was hired for the program-end evaluation as planned. However, it was reported that several convergence-led project interventions were introduced by line departments (spill-over effects) in the control villages. Hence a with–without comparison[64] was not used in the evaluation. However, since the PDO indicators were about adoption and knowledge, the absolute values of achievements related to project recommended interventions were measured using the endline survey. This does not say anything about what the levels of achievements would have been in the absence of the project. The sample of farmers in scale-up villages in the end-term evaluation was only 120, leading to higher margins of error in measuring the three RF indicator achievements.

M&E Implementation

60. (i) Online PMIS: An agency was contracted to design and implement the PMIS in the second half of 2018. The PMIS was designed with support from the Bank, but was not implemented by the procured agency. Instead, the two SRLMs collected data aggregated at the village level, of the total number of farmers, as well as various interventions and trainings that were recorded by CRPs on paper registers. These were sent periodically to the block offices for entry into Excel and for further aggregation at the block, district and state levels. However, farmer level adoption data were difficult to collect. Additionally, monthly farmer surveys were conducted through CropIn's mobile app by CRPs in the last nine months of the project to monitor adoption of weather advisories by farmers. (ii) Reporting: PDO indicator achievements reported in some ISRs (October 2018 and May 2019), were not accurate in comparison to the project-end evaluation findings, since the project data were not accurate. (iii) Mid-term evaluation: The agency recruited to conduct the mid-term evaluation was provided considerable support by the Bank but did a mediocre job[65]. However, since the grant closing date was extended, the mid-term evaluation became less relevant, while the project-end evaluation became credible. (iv) Social audit: Madhya Pradesh SLRM conducted community-led social audits of the

[62] This was a program evaluation conducted prior to project extension.
[63] This is however easier said than done. The author is not aware of successful examples of PMIS of livelihoods projects in India that digitally collect data on farmer level adoption of practices in a timely and reliable manner.
[64] While a with-without approach is not strictly required to measure the PDO, two control groups – non-SLACC and non-NRLM – were envisaged in the PAD.
[65] It is worth noting that there is a severe shortage of qualified quantitative impact evaluation specialists in India that commonly leads to poor quality of reports.

project.

M&E Utilization

61. The implemented PMIS was used only for monitoring by the SRLMs, and not for learning and course correction. However, RF achievements which can be verified only through project data were expected to be accurate since they are not transactionally intensive to collect and are tied to financial progress which comes under scrutiny. The mediocre quality of the mid-term evaluation partly contributed to the results not being used for informing the implementation. However, the Bank was proactive in presenting appropriate learning from the report to SRLMs and NMMU.

Justification of Overall Rating of Quality of M&E

Rating: Modest

62. **Justification:** The positives were that a credible program-end evaluation by a reputed agency was conducted, and the states eventually had a clear focus on the key performance indicators in the last two years and became result-oriented. The Bank brought in an expert for considerable technical support and added the availability of a PMIS as an intermediate indicator at restructuring. The areas of improvement listed above were considerable though some were ultimately addressed.

B. ENVIRONMENTAL, SOCIAL, AND FIDUCIARY COMPLIANCE

Environmental[66]

63. The project was classified rightly as "Category B" with safeguard policies of Environmental Assessment (OP/BP 4.01), Natural Habitats (OP/BP 4.04), Forests (OP/BP 4.36), and Pest Management (OP/BP 4.09) being triggered. The project adopted and customized the Environmental Management Framework[67] of the NRLP. The Environmental Management Framework guidelines/mitigations for agriculture, livestock, non-timber forest produce and fisheries, farmer trainings and field demonstrations were followed; and these were verified during Implementation Support Missions (ISMs) and reported in progress reports. The project complied satisfactorily with all the triggered safeguard policies, and subsumed: (i) chemical pesticides being excluded from crop advisories; (ii) no activities being done in forests or critical natural habitats; (iii) community undertaking regulatory approvals for drilling bore wells and tube wells for irrigation; (iv) CCAPs[68] being largely environmentally benign and supporting the improvement of the local environment (such as reduction of chemical fertilizers and pesticides, organic farming, water harvesting and conservation, use of solar pumps rather than diesel, enhancing biodiversity and green cover); and (v) environmental safeguards performance remaining satisfactory with no significant adverse impacts on the environment. Compliance was verified by (i) desk reviews of all the CCAPs by the SRLM managers and on a sample basis by the Bank team; and (ii) sample field verifications done by the Bank.

Social

64. OP 4.10 on Indigenous Peoples was triggered to hold informed consultations, community support, culturally appropriate information and benefit sharing. The project adopted and customized NRLP's Indigenous People's Framework that emphasized inclusion and alignment with the Bank's guidelines on assets creation and equity. The project complied satisfactorily with all the triggered safeguard policies.

[66] Based on written inputs from the World Bank environmental safeguards consultant.
[67] Environment Assessment and Environment Management Framework 30 April 2014 (Report# E4470 REV).
[68] Which provide the basis for the interventions to be launched.

Table 9: Social safeguard measures taken

Inclusion strategy	Implementation	Source of verification
Consultations	Consultations were held with women and men farmers from scheduled caste, scheduled tribe, smallholders and other disadvantaged groups and their community leaders at all stages	Minutes book of VOs Project Reports
Targeting	97 percent of women farmers identified participatorily were from disadvantaged groups	Field observations, VO members, PMIS data
Inclusive CCA Committee	CCA Committee in the VO included women farmers from disadvantaged groups	Project reports PMIS data
Capacity building	Training on social inclusion, tribal development and gender done for staff, CRPs, VO members and farmers	Project reports Field observations
Grievance Redressal Mechanism (GRM)	1. GRM system of NRLP was used 2. Local issues were addressed in VO meetings and minuted	Field observations

Fiduciary

65. **Financial Management:** The Financial Management Manual and Community Operations Manual developed for NRLP applied to SLACC. Financial management policies were embedded within the parent NRLP structures at the NMMU and SMMUs. Accounts were maintained using accounting software in the states and at the NMMU based on which acceptable Interim Unaudited Financial Reports (IUFRs) were sent to the Bank. Regarding financial controls at VOs[69], there were initial challenges in setting up an uniform system for submission and monitoring of Utilization Certificates (UCs) for the VO funds. Following requests from the Bank, extra efforts at the district and state levels led to collection of UCs in 2019. This led to compliance with the fiduciary requirements at project-end. External audit at the NMMU was done by the office of the Comptroller and Auditor General of India and at SRLMs by private chartered accountants. Though submission of audit reports to the Bank was delayed by a few months, the audited and claimed expenditures were similar, indicating a satisfactory basis for IUFR preparation for claims. All the audited reports were unqualified and financial management complied satisfactorily with Bank policies and guidelines.

66. **Procurement:** The procurement staff of the parent NRLP project and the NRLM procurement manuals were leveraged. Despite delays in hiring of state teams and the LTSA, procurement performance was rated as “Satisfactory” and the Project Procurement Risk was “Moderate”. All procurements complied satisfactorily with Bank policies and guidelines.

C. BANK PERFORMANCE

Quality at Entry

67. Preparation: Since the MoRD was focused on the larger NRLP, its engagement with the project was limited and specific experience in climate resilience was low. Hence, the Bank took the lead in organizing a series of workshops and exposure visits for the project team to learn from other technical resource agencies. The Bank also conducted several preparatory missions with technical, safeguards and fiduciary staff and coordinated carefully with the NRLP team at the MoRD and with the GEF, MoEFCC and with the SRLMs. The Bank completed the required formalities, despite this being the first GEF project in India with the MoRD (as the implementing agency) with added procedural complexities. The Bank coordinated internally with the NRLP team to present a single team front which was welcomed by the client. However, despite three years of preparation, GoI readiness was still low (the LTSA was not hired and

[69] Grants were given to the community-based organizations to on-lend for farmers wanting to invest in CCA interventions.

dedicated staff were not available at the MoRD[70]). The project was appropriate in terms of strategic relevance. It was focused on the rural poor and sound social development, environmental and fiduciary safeguard arrangements were made. Institutional and implementation arrangements were planned adequately. M&E arrangements were made for a project MIS and for midline and endline surveys to be conducted. A sound risk assessment was conducted. An EFA was not conducted since the project would not know the specific interventions that would be launched; instead cost–benefit ratios of specific interventions were drawn from the literature. The project was prepared using SCCF trust funds provided for preparation with nominal inputs of 25.5 staff weeks and US$113,512.

68. Risk assessment: The Bank assessed the risks comprehensively and tried to address them by: (i) using NRLM staff to run the project; (ii) highlighting the need for early hiring of the LTSA to bring dedicated project human resources, which had proved to be a source of delay; (iii) selecting two of the better performing SRLMs rather than a larger number of states to reduce performance risks; (iv) keeping ready procurement plans at preparation stage and safeguards and fiduciary arrangements (same as NRLP) to promote efficiency; and (v) identifying the risk of low management attention for this smaller project within the larger NRLP.

Quality of Supervision

69. Response to the slow initial progress: As an interim support in the absence of the LTSA and then further due to their unsatisfactory performance and the absence of a full-time coordinator at NMMU, the Bank provided hands-on assistance in the initial years by hiring technical experts to guide the SRLMs in the design of interventions. The Bank organized support on CCA through technical inputs, organizing workshops and consultations with experts, and organizing training for district staff. In particular, the Bank provided considerable technical support in developing the framework for the CCAPs and in facilitating agro-advisory services, both of which were project innovations. Discussions with the MoRD leadership and SRLMs revealed their perception of the Bank playing a larger than preferred role of driving the project directly with the SRLMs leading to reduced technical participation by the NMMU.

70. However, from the Bank's perspective, it took on the initiative due to large delays in onboarding the LTSA in a short 3.5 year project and slow progress in the first two years. Based on feedback from the MoRD (ISM, August 2018), the Bank reduced its hands-on role subsequently. The Bank supervised the project (including ICRR preparation) with Bank-executed SCCF trust funds (50 weeks; US$462,322) staying within the financial envelope provided by the GEF[71]. The Bank undertook 10 ISMs including field visits, in addition to a larger number of technical missions. ISRs of all the ISMs were documented and filed in a timely manner except for the last mission that happened close to the project closing date[72]. The team had sound representation from procurement (in 8 post effectiveness ISMs), financial management (7 ISMs), environmental and social safeguards management (6 ISMs), M&E (4 ISMs) and technical experts (7 ISMs). The initial slow disbursement of funds to the states, was partly addressed by advising the SRLMs to draw loans from NRLP funds. The Bank was pro-active in making the case for, and completing the procedures for restructuring in time to utilize the additional funds available (see restructuring section for details). The Bank supported the MoRD in procurement by training its staff on the World Bank's procurement portal and providing technical assistance to prepare good Terms of Reference.

71. Transitioning and scale-up: The Bank emphasized the completion of the operational guidelines for scale-up[73] and framing sound exit strategies including sustainability, equitable usage of project assets such as CHCs, and guidelines

[70] MoRD had institutional constraints in hiring dedicated human resources for SLACC at the central level as there was a cap on the maximum number of staff that could be hired by MoRD which was reached as part of the recruitment for the larger NRLP. Therefore, the National Farm Lead Livelihoods Coordinator of NRLP was designated as the National CCA Coordinator for SLACC.
[71] No Bank budget (BB) was used for preparation or supervision of this project
[72] ISR of the Final ISM held from December 12-13 2019 was not approved in the system as the project closed and thus does not show in the Datasheet.
[73] AM of the Final ISM, December 2019.

for continued control and ownership of the VOs over the assets beyond the project[74]. These transitioning strategies were by and large implemented.

72. Recognitions: The SLACC project received high acclaim and numerous mentions in various publications, including reputed newspapers and magazines in India, such as The Hindu newspaper, Times of India newspaper, India Today magazine, to name a few (for details refer to Annex 7). The Bihar SRLM bagged the third prize in the Sitaram Rao Livelihoods India Case Study Competition 2019 under the theme of "Climate Smart Agriculture". Both the SRLMs appreciated the Bank's technical assistance.

Justification of Overall Rating of Bank Performance

Rating: Moderately Satisfactory

73. **Justification:** There was a tremendous amount of sincerity, hard work, technical support and pro-activeness from the Bank. The ratings got pulled back because the Bank took three years to prepare and recognize the risks, but was unable to improve readiness resulting in delayed progress in the first two years after the project's effectiveness date. While recognizing the technical difficulty of the project, the Bank could have done better at improving clarity of PDO indicators, scale-up plans, M&E, and working more collaboratively with the NMMU in guiding the SRLMs.

D. RISK TO DEVELOPMENT OUTCOME

74. Potential risks and mitigants to the maintenance of development outcomes are described in Table 10. The project took a number of measures to support farmers to continue the practices that they wish to. The project continues to be part of the NRLM and has been handed over to the states' SRLM management for institutional continuity as per typical practices. The CRPs will continue and staff have been allocated to manage the project's beneficiaries. Towards the end of the project, CRPs and staff were given comprehensive training and farmers were given a CCAP review and guidelines for running institutions. Funds for adopting CCA interventions have been set up to help them to continue practices that they wish to. It was observed that 26–55 percent of the respondents who adopted an intervention during the project, reported they would continue that specific practice beyond the project period. This is because there was high interest in adopting only a subset of the interventions offered and low interest in others. There is no contradiction with PDO indicator 2, which reported that close to 50 percent would adopt at least two interventions after project closure.

Table 10: Potential risks and mitigants to the maintenance of development outcomes

Risk factor	Probability of occurrence	Mitigants	Impact on outcomes if risk materializes[75]
Farmers forget climate resilient production practices, or need further support	Low	• CRPs were given a comprehensive certificate course in 2019[76]. They scored well in the endline survey's knowledge test[77]. • CRPs will be continued in the SRLMs[78]. • Farmers received a review of CCAPs to reiterate climate risks to livelihoods and benefits of adaptation measures. Their	High

[74] AM of the 7th ISM, February 2019.
[75] Author's assessments based on discussions with SRLMs, progress reports and program evaluation reports.
[76] Project Completion Report.
[77] Program Evaluation report.
[78] Interview with Bihar RLPS CEO – CRPs will continue supporting SLACC farmers.

		knowledge levels were rated well. Some are expected to continue to receive advisories from their resource agencies.	
Farmers are unwilling to continue with the recommended production practices	Low to Moderate. 26–55 percent[78] of the adoptees of the various project interventions said they would continue that practice after the project ended	• Continued project support through CRPs. • While the percentage of continued adoption may seem high, this is across a large number of interventions. Farmers' intention to continue two interventions after the project is higher as reflected in PDO indicator 2.	Moderate
Farmers are unable to continue the recommended practices	Low, although two-thirds are landless[78] and most are poor	• CCA funds at the VOs are deemed adequate for members to borrow for certain interventions but not for ongoing demonstration sites. • Some diversification interventions for landless farmers were taken-up.	Moderate
Services stop	High for weather advisories whose subscription period from a private firm is over. Low for other interventions.	• CHCs, soil test laboratories, irrigation structures and nutrient and pest management shops are run and monitored by VOs with some revenue set aside and added funds for operations and maintenance. They have operational guidelines. • Advisory from agricultural universities will continue to be supported by the project in Bihar. • CRPs and irrigation will proceed using a fee based model (in Bihar SRLM) which is likely to promote sustainability. • It is to be decided if another weather forecast provider will be hired.	Moderate
Overall lack of support and monitoring by staff and CRPs stop practices from continuing	Medium	• SLACC villages and CRPs have been brought under the SRLM management which will continue engaging CRPs; but staff focus is likely to be limited since core NRLM interventions may be prioritized.	High

V. LESSONS AND RECOMMENDATIONS

75. **Measuring agricultural climate resilience is not easy:** Despite efforts by the Bank, it has not been easy to arrive at an appropriate methodology to define and measure a farmer's extent of climate resilience and the ideal target value for a project to aspire for. The methodologies to define resilience in terms of adoption of key practices or to measure the extent of resilience or recovery after an adverse weather event are not evident. Research efforts to define resilience and measure it in a standardized manner would help future projects in design, monitoring and project-end evaluation.

76. **Strong and timely human resources are critical to successful implementation**: While obvious, these points are often-times not adequately addressed. The project would have benefitted considerably from the early onboarding of a qualified LTSA. Given the difficulties in finding good LTSAs and experts, empanelment of experts and agencies would help new projects. Strong CRPs are viewed as critical to foster farmers' adoption of practices, especially innovative ones such as digital weather forecast based advisories. The hiring of well-educated, driven and motivated Young Professionals and state coordinators from the open market, exclusively dedicated to the project, has been a key success factor in the implementation of this challenging project which channeled energies to drive the project and form strong relationships with farmers. However, hiring the above takes time, which should be done at preparation or implementation delays should be anticipated.

77. **Knowing where to embed small learning pilots:** There is consensus that the NRLM with its platform of community institutions and experience in farm livelihood activities was well suited to embed a climate resilience layer as a pilot. However, future pilots may consider a larger scale to attract more senior management attention and facilitate scale-up and enhanced convergence with the Ministry of Agriculture to leverage its existing climate resilience initiatives.

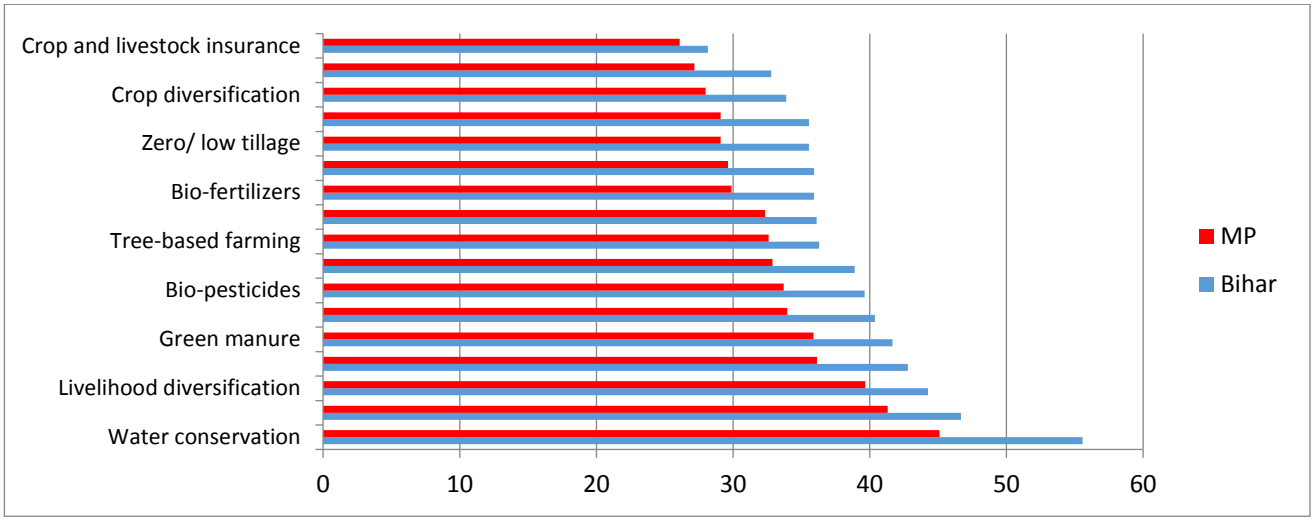
78. **Sustainability:** Despite intensive and focused efforts in this pilot, farmers reported unwillingness to continue some practices beyond the project period. Further research is required to understand the reasons and to provide support in the future. Around a third of the farmers in this project were landless and able to practice only diversification as a resilience measure since they had not leased-in farm lands. Future climate resilience projects may consider including non-farm livelihoods, in particular to support landless farmers better and to provide more holistic resilience. Table 11 showing outreach of the core project interventions as per the sample survey and Figure 1 presenting respondents who reported willingness to continue practices beyond the project period would help inform future projects.

79. **Bringing technology to the doorstep of communities triggered behavior change towards adoption of climate resilient practices**: Community-based irrigation introduced for establishing water use efficiency, and farm mechanization helped to reduce the cost of production as well as drudgery of the farmers, among others. Agriculture research systems and local research stations were further leveraged to disseminate technical solutions (climate resilient seeds and crop baskets) in farmer-friendly ways. Technical support and handholding of CRPs and lead farmers contributed significantly to building confidence and trust among the wider village community for behavior change.

Table 11: Sustainability

Intervention	Madhya Pradesh		Bihar	
	Achievement (%)		Achievement (%)	
	Original villages	Scale-up villages	Original villages	Scale-up villages
Implemented soil health improvements	66.8	34	60.1	62.5
Used weather forecast based advisories to improve production practices	11.4	0	3.1	0
Used climate resilient seeds	100	100	100	100
Used improved water conservation, harvesting and allied practices	77.7	64	81.1	90.6
Borrowed from the Climate Change Adaptation Fund	12.2	0	NA	NA
Undertook new livelihood or crop diversification	63.6	26	58	59.4
Used better livestock management, inputs and market linkages	8.5	2	NA	NA
Hired tools from the project's CHCs	12.8	0	6.5	3.1

Figure 1: Willingness of farmers to continue selected interventions



80. **Weather forecast based agro-advisory**: Digital applications that provided periodic alerts and advisories on mobile phones of farmers about package of practices and weather-adjusted farming schedules made the women farmers feel greatly empowered and confident of improving and sustaining their livelihoods by replacing archaic practices with climate resilient farming technologies. There was consistent feedback from the project staff and farmers that the weather forecast based agro-advisory service was a beneficial intervention. Cost per farmer would become cheaper and likely to be cost-beneficial if the service were to be launched at scale and with high adoption rates. The World Bank is planning on efforts to support state government officials working on other climate smart agriculture projects to provide this intervention to farmers. However, attention is needed to measure and ensure sufficient accuracy of the advisories and promote high access to and adoption of the advisories by farmers.

ANNEX 1. RESULTS FRAMEWORK AND KEY OUTPUTS

A. RESULTS INDICATORS

A.1 PDO Indicators

Objective/Outcome: Improve adaptive capacity of the rural poor engaged in farm-based livelihoods

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Indicator One: At least 50% of the targeted households adopt livelihoods with enhanced clime resilience	Percentage	0.00 10-Dec-2014	50.00 10-Dec-2014	50.00 10-Dec-2014	54.60 31-Dec-2019

Comments (achievements against targets):
ACHIEVED (109%).

The achievement was 54.6 percent which translates to 17,533 out of 32,120 farmers reached out to in the original and scale-up villages. The uses a simplified definition of climate resilience among landless farmers. This was the preferred measure of this indicator and is reported.

Adopting livelihoods with enhanced climate resilience is defined as the farmer adopting at least three of the following: (i) implemented soil improvements, (ii) used weather forecast-based advisories to improve production practices, (iii) used climate resilient seeds, (iv) used improved water conservation, harvesting and allied practices, (v) undertook new livelihood or crop diversification, (vi) used tools from the project's CHCs, (vii) borrowed from the Climate Change Adaptation Fund (CCAF), (viii) used better livestock management, inputs and market linkages.

The achievement in Madhya Pradesh was: Original villages: 73.7%, and scale-up villages: 42%; In Bihar it was Original villages: 70.4%, and scale-up villages: 84.4% among landed farmers who cultivated.

The sample for this indicator includes landless farmers in original villages who did not lease-in land and hence did not cultivate in the recall period of the endline survey and thus their only applicable resilience practice was diversification such as to livestock and mushrooms. The achievement among landless was — in Madhya Pradesh: Original villages: 32.4%, and scale-up villages: 30%; In Bihar: Original villages: 32.2%, and scale-up villages: 39.3%.

Applying the full project definition, the project enhanced resilience in the livelihoods of 50.1 percent of the farmers. Ifonly project participants who cultivated in at least one plot in the reference period of the survey are considered, the achievement is 63.9 percent.

Source: This indicator was measured through the program-end evaluation survey in November 2019.

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Indicator Two: At least 50% of the targeted households demonstrate strengthened awareness and owership of adaptation and climate change risk reduction processes/measures.	Percentage	0.00 10-Dec-2014	50.00 10-Dec-2014	50.00 10-Dec-2014	50.70 31-Dec-2019

Comments (achievements against targets):

ACHIEVED (101%).

Against the RF target of 50 percent, the project achieved 50.7 percent (which translates to 16,282 of the total outreach to 32,120 farmers). The achievement in Madhya Pradesh was: Original villages: 62.3%, and scale-up villages: 18.3%; In Bihar it was Original villages: 74.2%, and scale-up villages: 70%

The indicator was defined by the project as the percentage of farmers who satisfy the following conditions. In Madhya Pradesh, the farmer should have

satisfied all three of the following: (i) Was aware of the risks due to climate variability and change, their impacts on farm livelihoods and knew the interventions to reduce these risks; (ii) Was trained in at least one adaptation-related intervention; (iii) Adopted and/or was willing to continue at least two recommended CCA interventions after project closure.

In Bihar, the farmer should have satisfied the following: (i) Was aware of the risks due to climate variability and change, their impacts on farm livelihoods

and knew the interventions to reduce these risks; (ii) Participated in one CCAP and post-season CCAP review meeting; (iii) Was willing to continue at least two recommended CCA interventions after project closure.

The awareness levels were measured using a set of test questions on: (i) climate stressors and their impacts on livelihoods and (ii) benefits of adopting project interventions in ecology, finances, weather advisory and production technologies on their livelihoods.

Source: This indicator was measured through the program-end evaluation survey in November 2019.

A.2 Intermediate Results Indicators

Component: Component 1 – Community-based Climate Change Adaptation

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
At least 12000 farmers demonstrate climate resilient agricultural practices	Number	0.00 10-Dec-2014	8000.00 10-Dec-2014	12300.00 14-Jun-2018	19202.00 31-Dec-2019

Comments (achievements against targets):

ACHIEVED (156%): The achievement is 19,202 of the total reported outreach of 32,120 farmers in all project villages. This is based on extrapolating from the sample survey results to the total reported project outreach. The achievement in Madhya Pradesh was: Original villages: 3,389, and scale-up villages: 5,103; In Bihar it was Original villages: 4000%, and scale-up villages: 11320%

A farmer household is defined as demonstrating climate resilient practices if they adopted any three of the following. In Bihar: Attended CCAP meetings and any two of the following: (i) undertook non-pesticide management, (ii) undertook livelihood diversification, (iii) used climate-resilient seeds, (iv) used weather forecast based advisories to schedule farm operations. In Madhya Pradesh: (i) undertook soil health improvement, (ii) used climate-resilient seeds, (iii) undertook one new livelihood source and/or strengthened existing livelihood, (iv) increased usage of livestock management, (v) adopted recommended production, (vi) utilized moisture conservation water harvesting, improved irrigation or drainage, (vii) cultivated Poshan Vatika (nurseries/kitchen garden), (viii) used weather forecast based advisories to schedule farm operations**.**

This indicator was modified in the June 2018 restructuring.

Source: This indicator was measured through the program-end evaluation survey in November 2019. The sample percentage of farmers who practiced climate resilient practices was multiplied by the official total number of project farmers to arrive at this value. This achievement includes original and scale-up villages.

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Indicator Two: At least 30% of the community institutions access technical and/or financial support for climate adaptation plans thorugh convergence with Government programs.	Percentage	0.00 10-Dec-2014	30.00 10-Dec-2014	30.00 10-Dec-2014	76.00 31-Dec-2019

Comments (achievements against targets):

ACHIEVED (253%): Of the 200 Village Organizations in the original 200 project villages, 152 received financial support from at least one other government program through convergence.

The total value of the financial support was INR 463.6 million. Convergence support was for seeds procurement and input subsidies, setting up Custom Hiring Centers (for renting farm machinery and tools, plant protection tools), tree plantation, pest surveillance training, soil testing, solar irrigation, crop insurance, and livestock health management. Converging departments include that of agriculture, horticulture, animal husbandry, MGNREGS, fishery, irrigation, forestry, tribal development, among others.

Source: This indicator was reported in the program-end evaluation report based on data provided by the SRLMs and Village Organizations (VOs). This achievement is applicable to the original villages only.

Component: Component 2 – Scaling and Mainstreaming Community Based Climate Adaptation

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Indicator One: At least 6000 self-help groups are trained in adaptation-related technologies.	Number	0.00 10-Dec-2014	800.00 10-Dec-2014	6000.00 14-Jun-2018	6482.00 31-Dec-2019

Comments (achievements against targets):

ACHIEVED (108%): Against the target of 6,000 self-help group members in the original 200 and subsequent 593 scale-up villages, 6,482 were trained in adaptation related technologies. This includes 3,968 in Bihar and 2,514 in Madhya Pradesh. The definition of success of this indicator is as follows: (i) The farmer should have participated in the CCAP meeting. (ii) The farmer should have received at least one exposure visit to demonstration or other relevant sites. (iii) The farmer should have attended at least two training programs.

This indicator was modified in the June 2018 restructuring.

Source: This indicator was measured through the program-end evaluation survey in November 2019. Note that the target refers to the number of self-help group members and not groups as inadvertently specified.

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Indicator Two: At least 300 staff of state, district and block staff are trained in technical adaptation themes.	Number	0.00 10-Dec-2014	300.00 10-Dec-2014	300.00 10-Dec-2014	1736.00 31-Dec-2019

Comments (achievements against targets):

ACHIEVED (579%). Against the RF target of 300, 1,736 persons were trained on project interventions, including 489 staff and 1,247 CRPs in 793 total villages in 8 blocks. However, another section of the PAD sets a target of 980 staff and CRPs (80 project staff in original villages and 300 in scale-up villages and 200 CRPs in the original villages and 400 in scale-up villages). Using this target, the achivement is 177 percent.

The staff and CRPs received continuous training on: (i) Impacts of climate variability and change. (ii) Soil health management, organic farming, climate

resilient production practices. (iii) Farm mechanization and micro-irrigation systems. (iv) Livestock management. (v) Weather forecast-based crop advisories. (vi) Crop insurance and credit, and various department schemes. In addition, the National Institute of Rural Development and Panchayati Raj (NIRD&PR) conducted a comprehensive certificate course for 200 staff and 400 CRPs on climate change adaption in 2019.

The training was conducted by technical experts, NGOs, resources institutions and agriculture universities. The trainings were either residential, in classrooms, in the field, or were exposure visits. The knowledge level of trained staff measured through the endline survey was found to be adequate for supporting the interventions.

Source: The indicator was measured through the program-end evaluation survey in November 2019.

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Indicator Three: Climate change adaptation guidelines developed for NRLM implementation Framework and disseminated to all	Number	0.00 10-Dec-2014	1.00 10-Dec-2014	1.00 10-Dec-2014	1.00 31-Dec-2019

SRLMs					

Comments (achievements against targets):

PARTIALLY ACHIEVED. A circular titled "Operational guidelines for Community Climate Adaptation Grant (CCAG)" developed by the MoRD was circulated to the Chief Executive Officers/State Managing Directors of all the SRLMs on 30 December 2019.

The guideline specifies modalities for Village Organizations to access climate adaptation funds through SRLMs. The funds could be used for: (i) Increasing resilience of farm-based livelihoods. (ii) Capacity building of Village Organization members on climate change adaptation. Some guidelines for the types of interventions that qualify for the grant are provided. It is intended for SRLMs who wish to launch CCA initiatives.

The guidelines do not reflect any intention to mainstream CCA interventions in the NRLM. It does not allocate any budget for the Climate Change Advisory Group. It does not list any of the interventions actually implemented in the project or provide implementation guidelines for any specific CCA interventions. It does not endorse, recommend or provide incentives for SRLMs to launch any CCA interventions.

However, it should be noted that it is a tall order to expect implementation guidelines to be issued to mainstream project interventions within the project period. Hence the enhanced capacity and plans of Bihar SRLM and MoRD to leverage project learning to upscale selected interventions is an impressive achievement in this context.

Source: This indicator was assessed by the ICR team based on a review of the issued guidelines provided by MoRD.

Component: Component 3 – Project Management and Impact Evaluation

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Indicator One: Established Climate Adaptation Units staffed with full-time professionals within the NMMU and the SRLMs of the participating states	Number	0.00 10-Dec-2014	3.00 10-Dec-2014	3.00 10-Dec-2014	3.00 31-Dec-2019

Comments (achievements against targets):

ACHIEVED. The National Mission Management Unit at MoRD had designated a team of four officials to support the project. The national coordinator of Agricultural Livelihoods in NRLPS also led the coordination of SLACC. Additionally, two experts were placed by the Lead Technical Support Agency (LTSA) in the National Mission Management Unit (NMMU). (Source: Project Completion Report).

The SRLMs each had a dedicated State Climate Change Adaptation Coordinator, Young professionals and Block Coordinators at the Block Offices and one to two technical experts from the LTSA. (Source: State progress reports)

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Indicator Two: State Level resource agencies and /or technical services providers for providing field level technical support appointed and operational	Number	0.00 10-Dec-2014	2.00 10-Dec-2014	8.00 14-Jun-2018	25.00 31-Dec-2019

Comments (achievements against targets):

ACHIEVED (313%). Against a target of eight, 25 resource agencies were engaged by the MoRD and the two SRLMs in addition to other individual experts.

The project hired a common (to the two states) LTSA named Watershed Organisation Trust (WOTR) initially. WOTR was subsequently replaced in 2019 by the National Institute of Rural Development and Panchayati Raj.

Madhya Pradesh SRLM engaged Skymet Weather, CropIn Technologies (two private firms for weather advisories), Borlaug Institute of South Asia, Jabalpur,

Indian Grassland and Fodder Research Institute, Jhansi, JNKVV Jabalpur, MP, NDVSU Jabalpur, MP, CIAE Bhopal, MP, IGKVV Raipur, Chhattisgarh, NDRI Karnal, Haryana, KVK Mandla, MP, KVK Datia, MP, NRCSS Ajmer, Rajasthan, Bhungroo Site, Lalitpur, Uttar Pradesh, SRDS, Hubli, Karnataka. The latter agencies largely assisted in intervention design and training of CRPs, staff and farmers.

Bihar SRLM engaged PRAN Development Service Trust, CropIn Technology, Skymet weather services, Dr. Rajendra Prasad Central Agricultural University, Pusa, Borlaug Institute for South Asia, Bihar Agriculture University, IFFCO, IWMI-AKRSP(I), KVK Birouli, Samastipur and KVK Manpur Gaya, Makhana research station, Darbhanga, Bihar, IIVR, Varanasi, Central Potato Research station, Patna, ICAR RCER Patna, National Seed Corporation, MPUAT Udaipur, Rajasthan, Baran, Rajasthan, Laporiya, Rajasthan.

This indicator's target was modified from two to eight in the June 2018 restructuring.

Source: This indicator was reported in the program-end evaluation report based on data provided by the SRLMs and Village Organizations. See Appendix for details of the services provided by these agencies.

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
A P-MIS is functional and used to review extent of adoption of various	Number	0.00 10-Dec-2014	0.00 10-Dec-2014	1.00 14-Jun-2018	0.00 31-Dec-2019

interventions by farmers					

Comments (achievements against targets):

PARTIALLY ACHIEVED. An agency was contracted to design and implement a digital project management information system. The Project Management Information System (PMIS) was to collect and generate reports on farmer-level extent of adoption of recommended project interventions. The agency completed the design but failed to implement the PMIS. However, the following was done by the two SRLMs. Aggregated, village-level, total number of farmers by type of output (total number of farmers offered various interventions and training) was recorded by CRPs on paper registers. These were sent periodically to the block offices for entry into Excel and for further aggregation at the block, district and state levels. It was used to an extent for project monitoring by the SRLMs.

This indicator was added in the June 2018 restructuring.

Source: Discussions with the two state SRLM CCA Coordinators.

B. KEY OUTPUTS BY COMPONENT

Objective/Outcome 1: Poor farmers have the adaptive capacity to cope with future climate variability and change by understanding the risks of climate variability/change to livelihoods, how interventions help and intend to continue the practices in the future.	
Outcome Indicators	1. At least 50% of the targeted households demonstrate strengthened awareness and ownership of adaptation and climate change risk reduction process/measures.
Intermediate Results Indicators	1. At least 300 staff of state, district and block staff are trained in technical adaptation themes. 2. At least 6,000 self-help groups are trained in adaptation-related technologies.
Key Outputs by Component (linked to the achievement of the Objective/Outcome 2)	The following are Component 1 and Component 2 combined. Individual figures not available Number of SHG members trained in adaptation related technologies: 32,642 (Bihar 15,754, Madhya Pradesh 16,888) Number of community cadre/CRPs trained in adaptation related technologies: 1,660 (Bihar 810, Madhya Pradesh 850) Number of staff members trained in adaptation related technologies: 974 (Bihar 360, Madhya Pradesh 614) Number of community members and community cadre taken on exposure visits: 19,376 (Bihar 9,958, Madhya Pradesh 9,418) Number of CRPs and project staff who received certified training in CCA: 298 (Bihar 148, Madhya Pradesh 150) Number of seminars organized for sharing insights/lessons for policy making with government, donors, NGOs: 3 (Bihar 1, Madhya Pradesh 1)[79] Number of knowledge products for dissemination of knowledge and experience generated by SLACC: 16
Objective/Outcome 2: Poor farmer households adopt climate resilience measures in their livelihoods to cope with climate variability and change.[80]	
Outcome Indicators	1. At least 50% of the targeted households adopt livelihoods with enhanced climate resilience.

[79] One seminar was organised in Hyderabad by NIRD&PR.
[80] Bihar Progress Report and Madhya Pradesh Consolidated Report and Program Evaluation Report.

Intermediate Results Indicators	1. At least 12,300 farmers demonstrate climate resilient agricultural practices. 2. At least 30% of the community institutions access technical and/or financial support for climate adaptation plans through convergence with government programs.
Key Outputs by Component (linked to the achievement of the Objective/Outcome 1)	The following are Component 1 and Component 2 combined. Individual figures not available Percent of the project farmers belonging to a poor or disadvantaged community: 97% Number of villages covered: 793 (Bihar 383, Madhya Pradesh 410) Number of blocks covered: 8 (Bihar 4, Madhya Pradesh 4) Number of districts covered: 4 (Bihar 2, Madhya Pradesh 2) Number of SHGs covered: 8,706 (Bihar 4,861, Madhya Pradesh 3,845) Number of farmers covered: 32,120 (Bihar 15,320, Madhya Pradesh 16,800) Number of farmers covered by soil testing services: 8,119 (Bihar 5,034, Madhya Pradesh 3,085) Number of automated weather stations and automated rain gauges established: 200 (Bihar 100, Madhya Pradesh 100) Number of farmers covered through weather based agro advisory services: 8,704 (Bihar 4,216, Madhya Pradesh 4,488) Number of CHCs established: 605 (Bihar 361, Madhya Pradesh 244) Number of farmers who accessed a CHC or Village Tool Bank: 13,884 (Bihar 5,884, Madhya Pradesh 8,000) Number of solar irrigation systems installed: 113 (Bihar 73, Madhya Pradesh 40) Number of VOs that developed CCAPs and were provided CCAP grants: 793 (Bihar 383, Madhya Pradesh 410) Average amount of CCAP grant provided per VO: INR 410,652 Average amount of loans provided (for agriculture activities) per VO: INR 203,297 Number of households who received technical or financial benefits through convergence from other government or non-government sources: 175,776 (Bihar 163,883, Madhya Pradesh 11,893) Amount of convergence funding obtained: INR 466,125,575 (Bihar INR 196,336,393, Madhya Pradesh INR 269,789,182) Number of schemes/agencies with which convergence was undertaken: 30 (Bihar 18, Madhya Pradesh 12) Number of beneficiaries of convergence funding: 175,776 (Bihar 163,883, Madhya Pradesh 11,893) Number (and %) of VOs that benefitted from convergence funding: 647 (82%) (Bihar 317, Madhya Pradesh 330) Average amount of convergence funds received per VO: INR 720,441 (Bihar INR 619,358, Madhya Pradesh

	INR 817,543)
Objective/Outcome 3: Efficient and effective management of SLACC components.	
Outcome Indicators	Not applicable. Contributes to other components
Intermediate Results Indicators	Established climate adaptation units staffed with full time professional within the NMMU and SRLM of participating states. State level implementation teams/resource agencies for providing field level implementation support appointed and operational. A PMIS is functional and used to review the extent of adoption of interventions by farmers.
Key Outputs by Component (linked to the achievement of the Objective/Outcome 2)	Number of full-time professionals in Climate Adaptation Units of SRLMs: 23 (Bihar 11 , Madhya Pradesh 12) Number of community cadre/CRPs on climate adaptation in SRLMs: 726 (Bihar 376 , Madhya Pradesh 350) Percentage of women CRPs involved in SLACC interventions: Bihar 67%, Madhya Pradesh 15% Number of resource agencies and/or technical support partners: 16 unique partners (Bihar 15, Madhya Pradesh 4) (3 NGOs, 4 firms, 9 research agencies)

C. DETAILS ON SELECTED OUTCOMES[81]

Outcomes	**Total**	**Bihar**	**Madhya Pradesh**
Number of farmers who adopted at least one recommendation on soil health improvement made on the basis of soil test results	29,872	15,320	14,552 (8,352 from core villages, 6,200 from scale-up villages)
Number of farmers who adopted Azolla cultivation (for fodder and manure)	6,086	3,234	2,852
Number of farmers with access to protective irrigation in at least one third of the farmland in at least one season	4,648	2,560 (2,080 from core villages, 480 from scale-up villages)	2,088 (1,388 from core villages, 700 from scale-up villages)
Number of farmers who adopted climate resilient seed varieties in at	29,086	16,800	12,286

[81] Sources: Bihar Results Framework February 2020, Madhya Pradesh Results Framework November 2019.

least one third of the farmland at least once per year		(4,650 from core villages, 12,150 from scale-up villages)	(10,286 from core villages, 2,000 from scale-up villages)
Number of farmers who adopted Direct Seeding of Rice	201	101	100
Number of farmers who practiced non-chemical pest management (NPM) in at least one season for at least one-third of the farm acreage	26,338	12,550 (3925 from core villages, 8625 from scale-up villages)	13,788 (4488 from core villages, 9300 from scale-up villages)
Number of farmers who demonstrated improved scheduling of farm operations on the basis of weather forecast	8,714	4,226 (All from core villages)	4,488 (All from core villages)
Number of farmers who diversified to other crops and non-crop livelihoods	19,618	11,945 (4150 from core villages, 7795 from scale-up villages)	7,673 (All from core villages)
Number of farmers who understand how adverse weather events harm yield and how interventions recommended help them to adapt	29,283	15,495 (4,175 from core villages, 11,320 from scale-up villages)	13,788 (4,488 from core villages, 9,300 from scale-up villages)
Number of farmers who intend to continue any two interventions suggested under SLACC after closure	21,459	15,420 (4,100 from core villages, 11,320 from scale-up villages)	6,039 (4,039 from core villages, 2,000 from scale-up villages)

ANNEX 2. BANK LENDING AND IMPLEMENTATION SUPPORT/SUPERVISION

A. TASK TEAM MEMBERS

Name	Role
Preparation	
Priti Kumar	Task Team Leader(s)
Balagopal Senapati	Procurement Specialist(s)
Manvinder Mamak	Financial Management Specialist
Ruma Tavorath	Environment Specialist
Varun Singh	Social Specialist
Supervision/ICR	
Priti Kumar	Task Team Leader(s)
Balagopal Senapati	Procurement Specialist(s)
Tanya Gupta	Financial Management Specialist
Radha Narayan	Procurement Team
Payal Malik Madan	Procurement Team
Lalita Srinivas	Team Member
Anupam Joshi	Environmental Specialist
Pamela Patrick	Procurement Team
Varun Singh	Social Specialist
Sivaramakrishnan Kumar	Procurement Team
Francis Addeah Darko	Young Professional

Extended Team	
Shantanu Kumar	M&E Specialist Consultant
Karuna Krishnaswamy	Impact Evaluation Specialist Consultant
Kundan Singh; Manu Sinha	Economist; Livelihoods Consultant, FAO
Madhushree Banerjee	Social Specialist Consultant
S.C.Rajsekhar	Agricuture and Technology Specialist Consultant
Kalyani Kandula	Natural Resources Management Specialist Consultant
Vanitha Kommu	Environment Specialist Consultant

B. STAFF TIME AND COST

Stage of Project Cycle	Staff Time and Cost	
	No. of staff weeks	US$ (including travel and consultant costs)
Preparation		
FY13	6.630	44,304.01
FY14	18.867	69,208.57
FY15	0	0.00
Total	**25.50**	**113,512.58**
Supervision/ICR		
FY15	6.400	51,587.75
FY16	8.102	86,666.01
FY17	16.150	111,493.67
FY18	3.175	48,281.94
FY19	4.475	44,328.52
FY20	11.833	123,480.40
Total	**50.14**	**465,838.29**

ANNEX 3. PROJECT COST BY COMPONENT

World Bank Contribution

Components	Amount at Approval (US$ million)	Actual at Project Closing (US$ million)	Percentage of Approval (US$ million) (estimated by prorating adjustments)
Component 1 – Community-based Climate Change Adaptation	6.20	5.61	90%
Component 2 – Scaling and Mainstreaming Community Based Climate Adaptation	1.48	1.32	89%
Component 3 – Project Management and Impact Evaluation	0.32	0.25	78%
Total	**8.0**	**7.18**	**90%**

Total Project Costs including government contribution

	Original amount (US$ million)	Revised amount (US$ million)	Actual disbursed (US$ million)
World Bank financing			
SCCF/GEF	8.0	8.0	7.18
Sub-Total			
Non-World Bank financing			
Borrower/recipient	2.17	4.67	4.19
Sub-Total			
Total project cost	10.17	12.67	**11.37**

ANNEX 4. EFFICIENCY ANALYSIS[82]

1. This annex quantifies the cost effectiveness of the project and is organized as follows: (i) summary of the efficiency analysis conducted at appraisal; (ii) project financials and key project outputs; (iii) project cost efficiency analysis at completion; and (iii) cost-effectiveness analysis done by comparing the total project cost per beneficiary household at completion with that at appraisal, and of other similar projects.

Efficiency analysis at appraisal

2. An ex-ante cost–benefit analysis at preparation was not conducted because: (i) the locale-specific interventions to be launched were to be discovered during the project and were not known at preparation, and (ii) methodological difficulties associated with estimating benefits from climate resilience. The economic analysis of a CCA project would ideally compare the productivity and incomes of farmers who adopt adaptation interventions with those who do not adopt adaptations despite normal weather and adverse weather events over the years, during and beyond the project. However, this involves availability of local time series data on adverse weather events and farmer outcomes during the project and projections beyond the project period. This assumes that there were sufficient adverse events in actuality in the project locations. Moreover, the margins of error of predictions of future climate scenarios is difficult to ascertain. Hence, quantifying potential benefits is technically difficult. The analysis instead made a case for efficiency based on the following: (i) It presented the cost–benefit ratios (CBRs) of potential interventions measured in past projects. These CBRs were almost all less than one or negative suggesting high benefits compared to costs. (ii) In 22 previous Bank projects in the areas of watershed management and sustainable land and water management, the median economic rate of return was 20 percent and yields increased in the range of 20–70 percent. (iii) The linkages with MGNREGS and MKSP were expected to substantially increase land-related investments by farmers.

Project cost and duration

3. The total project cost at appraisal was US$10.17 million which was revised to US$12.67 million at restructuring due to changes in counterpart financing rules on the ratio of center to state contributions from 75:25 to 60:40[83]. This change increased the project cost by 24.6 percent in US Dollar terms. At project closure, the total amount spent by the project was US$11.37 million, which was 111.8 percent of the appraisal estimates. In Rupee terms, the project spent INR 757.59 million, which was 121.3 percent of the appraisal estimates. The increased spending in INR can be attributed partly to the exchange rate gains of 8.5 percent over the project's life, which is much lower than the average local inflation rate of 1.5 percent over the same period[84].

Table A4.1: Project funds by source

		At appraisal	At restructuring	At closure	% spent out of budget at appraisal	% spent out of budget at restructuring
Grant	Million US$	8.00	8.0	7.18	89.8%	89.8%
	Million INR	491.28[85]	544.4	478.41	97.4%	87.9%

[82] This annex was written by Manu Sinha, Kundan Singh and Francis Addeah Darko.
[83] Report No. RES32185: Disclosable Restructuring Paper for SLACC Project.
[84] Wholesale Price Index, Office of the Economic Adviser, GoI, from 2014 to 2019. Other data from the final IUFR and project expenditure statements.
[85] Calculated based on the exchange rate at appraisal.

Borrower	Million US$	2.17	4.7	4.19	193.1%	89.7%
	Million INR	133.26	317.8	279.18	209.5%	87.9%
Total	Million US$	10.17	12.7	11.37	111.8%	89.7%
	Million INR	624.54	862.2	757.59	121.3%	87.9%

4. Although the project spent more than the appraisal estimates, it was not able to utilize the grant fully as per Table A4.2 below. This was because of less expenditure at the center level. At the state level, the project spent 103.1 percent of the estimate at appraisal (111.9 percent in INR terms) but at the center the expenditure was only 31.7 percent of appraisal estimates (34.4 percent in INR terms). The reasons that contributed were the center completing its activities using less resources than anticipated and due to initial delays in programming.

Table A4.2: Project budget and expenditure

		At appraisal	At restructuring	At closure	% spent out of budget at appraisal	% spent out of budget at restructuring
Center (MoRD)	Million US$	1.50	1.00	0.48	31.7%	47.6%
	Million INR	92.1	68.1	31.7	34.4%	46.6%
State	Million US$	6.50	7.00	6.70	103.1%	95.8%
	Million INR	399.2	476.4	446.6	111.9%	93.8%
Total	Million US$	8.00	8.00	7.18	89.8%	89.7%
	Million INR	491.3	544.4	478.4	97.4%	87.9%

Key Project Outputs

5. The project aimed to implement climate adaptation interventions in agriculture by community institutions (i.e. self-help groups, federations and common interest/producer groups/producer companies) utilizing the community CCA grants as a top-up to the Climate Investment Fund (CIF), upon approval of the community adaptation plan. The below table highlights some of the key outputs of the project.

Table A4.3: Outputs linked to Component 1

Key Outputs linked to Component 1		Madhya Pradesh	Bihar	End of Project
Villages	No.	410	383	793
SHGs	No.	3,845	4,861	8,706
Households under SHGs	No.	15,400	15,320	30,720
Households covered by soil testing services	No.	3,085	5,034	8,119
Automated weather stations and automated rain gauges established	No.	100	100	200
Farmers covered through weather based agro advisory services	No.	4,488	4,216	8,704
Custom hiring center (CHC)	No.	244	361	605
Farmers accessed CHCs	No.	8,000	5,884	13,884
Solar irrigation systems Installed	No.	40	73	113
Farmers participated in CCAP preparation and review	No.	10,100	4,500	14,600
Households that received financial or technical benefits through	No.	11,893	163,883	175,776

convergence				
VOs that received financial or technical benefits through convergence		330	100	430

Key Outputs linked to Component 2				
Community members and cadres taken on exposure visit	No.	9,418	9,958	19,376
SHG members trained in adaptation related technologies	No.	16,888	15,754	32,642
Community cadre/CRPs trained in adaptation related technologies	No.	850	810	1,660
Staff members trained in adaptation related technologies	No.	614	360	974
Village resource persons and project staff who received certified training in CCA (from NIRD&PR)	No.	150	148	298

Convergence

6. The project has been very successful in linking with a host of agencies covering primarily the government departments at district and state level, agriculture universities etc. Given the actual disbursement of INR 757.59 million, the project has been successful in mobilizing INR 463.61 million which is 61.02 percent of the project cost. Of this, the project in Madhya Pradesh mobilized INR 267.28 million (35.28 percent of project cost) and INR 196.33 million was mobilized in Bihar (25.92 percent of project cost). Tables A4.4 and A4.5 below present funds mobilized through convergence under the project for each state respectively.

Table A4.4: Activity-wise convergence for the state of Madhya Pradesh

Government departments/programs	**Convergence activities**	**Amount (in million INR)**
Agriculture department, horticulture department	Farm machinery/ equipment, drums, sprayers, pump, pipes	30.62
Agriculture department, horticulture department, forest department, KVK, Borlaug Institute for South Asia	Crop inputs: seed, fertilizers, seedlings, orchard	7.11
Rural development department, MGNREGA, agriculture department, electricity department, tribal development department, Fal Ful Sag Bhaji Samiti, NRLM	Infrastructure: irrigation facilities, solar pumps, organic manure, electricity, nursery, cattle shed	56.80
Rural development department, MGNREGA, community contribution	Soil moisture conservation	16.22
Animal husbandry department, NGOs	Livestock-cattle, poultry, other, health camps, pasture development, fodder	4.42
Rural development department, Gram Panchayat, MGNREGA, Fishery department, Irrigation department, community contribution	Community resources development: new source, repair and maintenance of water bodies, such as pond, canal, well, bore well, fishery pond, Bori Bandhan	60.59
NRLM	Agriculture inputs, irrigation equipment's, water resource development like well, bore well, hath bore, cattle induction, poultry, goatry, fishery, NTFP etc.	91.50
Grand Total		**267.28**

Table A4.5: Activity-wise convergence for the state of Bihar

Government departments/programs	Convergence activities	Amount (in million INR)
Agriculture universities	Availing seed and technical input, exposure visit, papaya sapling and technical guidance for plantation	9.04
Agriculture department	Custom Hiring Centre, Krishi Input Subsidy Scheme	11.10
Horticulture department	Mushroom kit, Tree planting-Van Poshak scheme	1.06
Krishi Vigyan Kendra (KVK)	Pest surveillance training at KVK	0.32
Block agriculture department	Vermicompost	1.00
The Energy Resources Institute	Solar stove	1.12
Bihar Renewable Energy Agency	Solar irrigation set (2HP)	8.81
Block agriculture department	Contingency crops, zero tillage, crop insurance	3.33
MGNREGA	Animal sheds	0.85
NRLM	Community institution building support	151.74
	Others, specify	7.87
	Total	**196.33**

Methodology for efficiency analysis as completion

6. Background: Three reasons made the efficiency analysis difficult. (i) It was methodologically difficult to compute the economic rate of return as discussed above. (ii) This was a small, exploratory, pilot project for learning that sought to test CCA interventions for potential scale-up in the NRLM. Its success lay in discovering beneficial interventions and models that would be scaled up. Not all interventions were expected to be successful. Being a novel project, there was a substantial learning curve for the implementing teams and hence efficiency expectations were modest.

7. Relevant benefits/objectives of the project: The primary objective was that the target number (4,000) of farmer households would adopt climate resilient livelihoods and take ownership of the services for the future. The secondary objectives were to train CRPs and staff, as well as to foster learning for SRLMs and MoRD to scale up interventions in the future.

Table A4.6: Project outreach

	Target at appraisal	Target at restructuring	Actuals
Number of farmers reached out to (primary beneficiaries)	8,000	12,300	32,120
Number of farmers who adopted livelihoods with enhanced climate resilience	4,000	6,150	16,098
Number of farmers reached out to plus staff and CRPs trained (Primary plus secondary beneficiaries)	8,980	13,280	33,856

8. Methodology: The project's cost-effectiveness was quantified by computing the total project cost per beneficiary household (with and without convergence funds) and comparing it to the value at appraisal and with past projects of similar budget and scale.

9. Comparison projects: The following comparator projects were selected from among other World Bank projects. Eleven climate resilience projects from different countries were considered. These projects were assessed for similarity to SLACC and four were shortlisted: (i) Climate change adaptation project in Philippines; (ii) Kenya

adaptation to climate change in arid and semi-arid lands project; (iii) Building climate disaster resilience along the Dili-Ainaro and Linked road corridors in Timor-Leste; and (iv) Agro-diversity and climate change adaptation project and the associated piloting coping strategies for rainfed farmers project in Yemen. The common features were:

- Capacity building of personnel at national and state levels on climate change adaptation.
- Context-specific agriculture interventions at the core of climate change adaptation.
- Climate change adaptation planning at community level.
- Weather based advisory system/early warning system.
- Demonstration of climate change adaptation for scale-up.

10. The limitations of this approach were: (i) The projects were not exactly similar to each other though close enough. (ii) Costs were converted to US Dollars using nominal exchange rates rather than in terms of Purchasing Power Parity. (iii) Only the total outreach of the project was known and not the percentage of beneficiaries in the comparison projects who actually became climate resilient. (iv) The projects in Kenya and Timor-Leste defined project beneficiaries as direct plus indirect beneficiaries without mentioning specific criteria of adaptation leading to a high number of beneficiaries and hence low cost per beneficiary. Hence, their true value of cost per direct beneficiary could be inflated.

Table A4.7: Comparison projects

Project	Description of components	Duration
Philippines[86]: Climate Change Adaptation Project	Support integration of CCA into agriculture and natural resources sectors, strengthen capabilities of government agencies, include field level adaptation demo pilots. Improve access of end users in the agriculture and natural resources sectors to more reliable scientific information, to enable more rapid and accurate decision-making for climate risk management.	2010-16
Kenya[87]: Adaptation of Climate Change in Arid and Semi-Arid Lands	Strengthen capacity and institutional coordination among relevant agencies to better assess and respond to climate risks. Provide capacity building and integrate climate risk management into county planning processes and programs through. Support investments to implement climate smart public and private sector interventions. Help beneficiaries adopt CCA strategies and investments to reduce climate related vulnerabilities and strengthen climate resilience by adopting adaptation technologies.	2010-17
Timor-Leste[88]: Building Climate/Disaster Resilience Along The Dili-Ainaro and Linked Road Corridors in Timor-Leste	Build capacity at the central, sub-district and community levels to: (i) improve community-based disaster risk management (CBDRM); (ii) identify small scale CBDRM activities; (iii) prepare comprehensive community level CBDRM plans. Prepare comprehensive DRM plans for local governments. This included: (i) support to identify small scale risk reduction measures; and (ii) support for local governments to implement up to three prioritized risk reduction/adaptation activities.	2014-18

[86] ICRR Report No: ICR00004164
[87] ICRR Report No: ICR00004143
[88] ICRR Report No: ICR00004828

Yemen[89]: Agro-biodiversity and Adaptation Project	Develop inventory of local agro-biodiversity, and identify and test selected landraces for climate resilience. Raise awareness on climatic changes and develop localized predictive capacity of weather patterns and long-term climate change scenarios. Integrate climate resilience into rainfed agriculture by capacity building of Ministry of Agriculture and Irrigation, develop a climate-resilience strategy, and develop and pilot coping strategies with the communities.	2010-15

Results

11. The cost per beneficiary at completion was US$354 (Table A4.8) without convergence funds. This compared favourably with the cost per beneficiary estimated at restructuring of US$1,030 at appraisal. The lower costs were due to the higher outreach achieved (32,120 farmers) compared to planned (12,300 farmers). It was also lower than the average cost per beneficiary of comparison projects of US$626 (Table A4.9). In particular, it was higher than that of the Yemen project whose efficiency was rated Substantial at ICR based on cost per beneficiary.

Table A4.8: Cost per project beneficiary

Indicator	Planned at appraisal	Planned at restructuring	Actual at closure w/o convergence	Actual at closure w/ convergence
Total project costs (US$ million)	10.17	12.67	11.37	18.39
Cost per beneficiary reached out to (US$)	1,271	1,030	354	573
Cost per farmer who adopted livelihoods with enhanced climate resilience (US$)	2,543	2,060	706	1,142

Table A4.9: Cost per beneficiary of comparison projects

Project details	Project cost (US$ million)	No of beneficiary households	Nominal cost per beneficiary household (US$)
Project in the Philippines	3.88	2,104	1,844
Project in Kenya	5.5	37,977	145
Project in Yemen	5.24	11,123	471
Project in Timor-Leste	2.67	59,730	45
Average			**626**

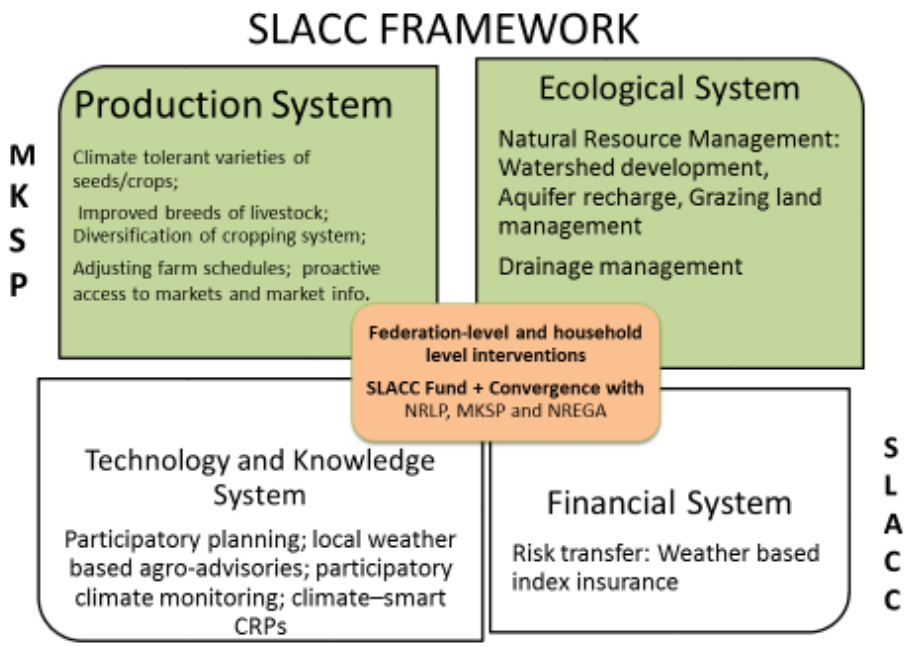
Conclusion

12. The cost per beneficiary at completion was substantially lower than at appraisal. The project ranked in the middle of other similar projects, but more importantly was lower than that of Yemen where the efficiency was rated Modest by IEG due to low cost per beneficiary. While cost-effectiveness has been good, the overall efficiency was assessed based on operational efficiency and future scale-up opportunities attributable to the project.

[89] ICRR Report No: ICR00003420

ANNEX 5. BORROWER, CO-FINANCIER AND OTHER PARTNER/STAKEHOLDER COMMENTS

This Ministry has gone through the ICRR and found some issues that are described below[90]:

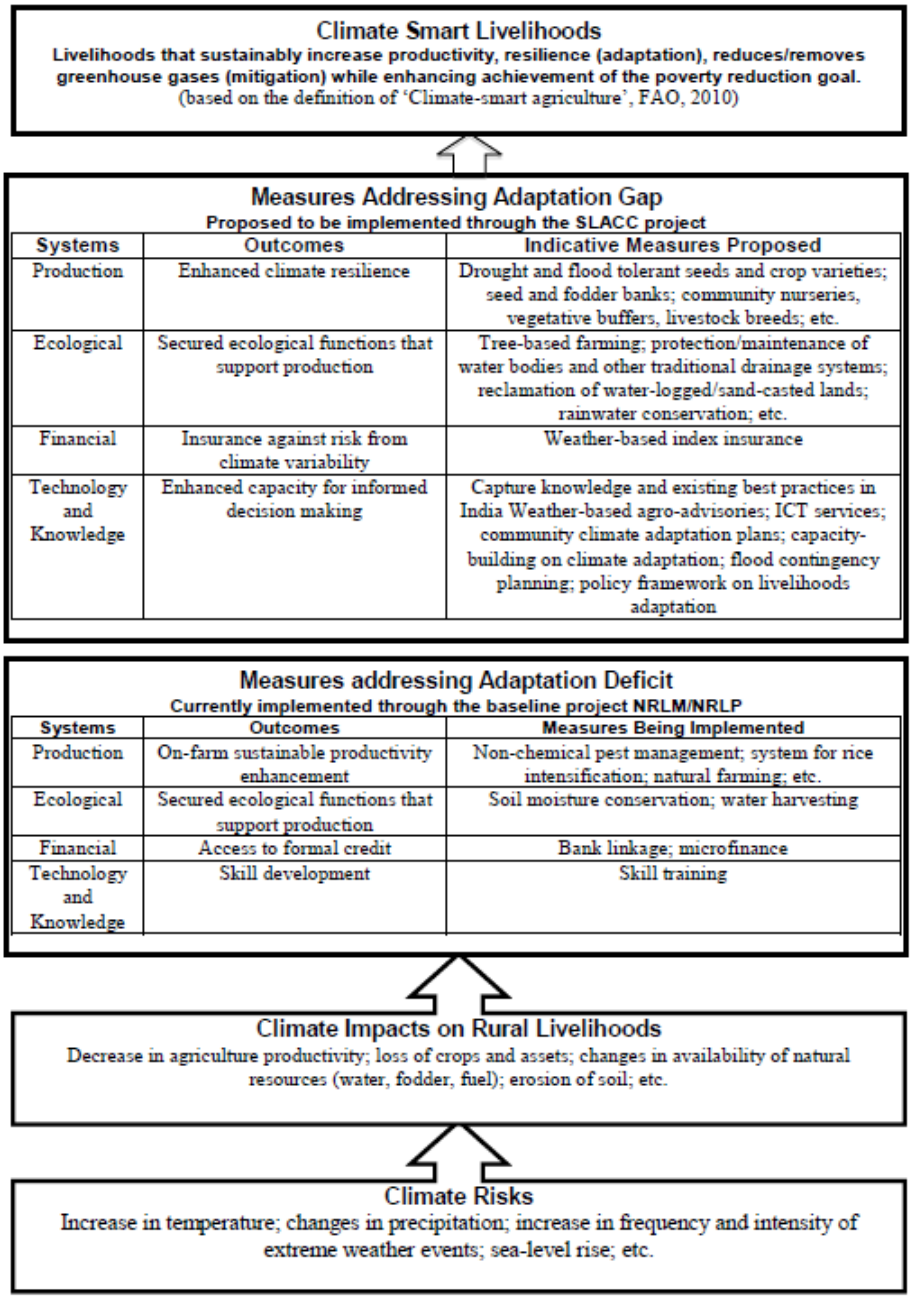
Para No. in ICRR	Statement of ICRR	MoRD's Comments
5,6,7,37,47, 65	Experience of MoRD: In various para in the ICRR, it is expressed that, DAY-NRLM has low experience in the climate resilience interventions. SLACC only brought the climate resilience in the DAY-NRLM.	With reference to this statement of ICRR, this is to state that the farm livelihoods interventions started in DAY-NRLM since 2011 through MKSP and since then it has been promoting Agro Ecological Practices with women farmers and all thepractices are climate change resilient. Moreover, when SLACC was being implemented the framework below was referred to for clarity by World Bank which is self-explanatory.  This is also to state that at the time of inception of SLACC, DAY-NRLM had already implemented agro-ecological practices in 700 blocks of 115 districts and reached out to 33.54 lakh women farmers with 19,599 CRPs.
51, 53,55, 65	Low Government	Firstly, there was no dedicated staff provisioned in SLACC budget at the Ministry. It was envisaged that the LTSA would do the programme management

[90] The paragraph numbers mentioned in the table may not exactly match those in the ICRR, as the ICRR was edited after the advanced draft document was shared with the client.

	engagement/ commitment: In various paragraphs of ICRR it has been stated that, there was a low Govt. engagement and also dedicated staff was not placed at MoRD.	and provide technical assistance and MoRD's role would be to oversee the financial and administrative matters of the project implementation. Secondly, there is no such evidence of low Government commitment. All the due diligence for fund release to SRLM, LTSA and evaluation agency was done by the Ministry on time. Moreover, Joint Secretary -RL reviewed the progress of SLACC on a monthly basis. Thirdly, it is mentioned several times that due to NRLP implementation, SLACC did not get sufficient focus from MoRD. If this was the actual case, the project could not have been completed with more than 100% achievement in each PDO indicator (please refer to page no 28 to 43 of ICRR).
51, 54, 55,65	Delay in process/longer preparatory phase: In various paragraphs it is stated that MoRD made an inordinate delay in SLACC roll out, hiring of LTSA etc. so the process and progress delayed. Till three years it has made no or very little progress.	The process of hiring LTSA was initiated at Ministry level as soon as the project got approved. The fund to the states were also released on time and preparatory phase was not three years as mentioned in ICCR. It has been mentioned several time that till three years the progress of the project was very low. Referring to the 2nd steering committee minutes, it can clearly be seen that till March, 2018, the SRLM has not only achieved the targets, but also finished the preparatory works for scaling up of the project. Therefore, it is evident that there was no delay either in process initiation or in the achievement of the targets. So the inordinate delay as mentioned is not tenable.
55 .	Low utilization of funds: the project results were compared with the utilization of funds.	"At project closure, the total amount spent by the project was US$11.37 million, which was 111.8 percent of the appraisal estimates. In Rupee terms, the project spent INR 757.59 million, which was 121.3 percent of the appraisal estimates. The fund utilization is not the ultimate scale to measure the achievement of the targets."(please refer to "Annexure 4" at page No. 47 of ICCR).

ANNEX 6. IMPACT CHAIN FOR CLIMATE RESILIENT LIVELIHOODS (as in PAD)

Figure A6.1: Impact chain as per PAD



ANNEX 7. SUPPORTING DOCUMENTS (IF ANY)

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ANNEX 8. GEF RESULTS INDICATORS

GEF Indicators[91]

The indicators in this section are abridged from the Program Evaluation Report. They are based on data collected of project farmers in a representative survey from the original and scale-up villages which were added after restructuring.

GEF Indicator 1.3.1.1

Indicator	Unit of Measurement	Achievement at Completion		
		Madhya Pradesh	Bihar	Overall
Percentage of targeted households that have adopted resilient livelihoods under existing and projected climate change	Percentage	Original villages: 73.7% Scale-up villages: 42%	Original villages: 70.4% Scale-up villages: 84.4%	54.6%
Comments: i) Project participants were on the path to achieving resilience to climate variability and change. ii) Fuzzy Cognitive Mapping (FCM)-based simulations suggest that a bare minimum adaptation intervention for providing resilience to the livelihoods of the poor community in drought-prone areas should include (a) soil health improvement measures, (b) water conservation measures, (c) climate-resilient varietal replacement, and (d) crop and livelihood diversification. iii) Similarly for drought-prone areas, it should include: (a) soil health improvement measures, (b) tree cover enhancing measures, (c) climate-resilient varietal replacement, and (d) crop and livelihood diversification. iv) All adaptation measures currently implemented under SLACC need to be adopted for resilience in the context of projected climate change. v) Enabling conditions, such as climate information and advisory services, financial services, and the capacity building of the community and institutional effectiveness, are vital for facilitating the adoption of resilience measures in the context of projected climate change.				

Source: Based on the program-end household survey.

GEF Indicator 2.3.1

Indicator	Unit of Measurement	Achievement at Completion		
		Madhya Pradesh	Bihar	Overall
Percentage of targeted population awareness of predicted adverse impacts of climate change and appropriate responses	Percentage	Original villages: 62.3% Scale-up	Original villages: 74.2% Scale-up	50.7%

[91] Program Evaluation Report by Institute of Rural Management (IRMA).

		villages: 18.3%	villages: 70%	

Comments:
i) The project participants in Bihar were more aware of climate stressors and their impacts compared to project participants in Madhya Pradesh.
ii) The main climate stressors were variability of temperature and precipitation, as well as extreme climatic and weather events, such as droughts, floods and heatwaves. The main direct impacts on livelihoods included impacts on water availability, soil moisture, land degradation, crop loss, agriculture and livestock productivity, and health and quality of life.
iii) Project participants in Bihar were more aware of the adaptation measures being implemented compared to project participants in Madhya Pradesh.

Source: Based on the program-end household survey.

GEF Indicator 2.2.2

Perception Index	Achievement at Completion (Percentage of project participants)		
	Madhya Pradesh	Bihar	Overall
1	100	100	100
2	90.8	96.3	93.5
3	94.1	82.7	88.3
4	67.4	77.7	72.4
5	39.2	44.9	41.9

Comments:
Capacity Perception Index measures the farmers' ability to become resilient to climate change risks. It is calculated based on the following perception indicators:
- Awareness of climatic risks, and their impacts on livelihoods.
- Awareness of the interventions which may help them adapt to the climatic risks
- Participated in CCAP and post-season review.
- Adopted or willing to adopt at least two interventions in the future.
- Undertook training or exposure visits on adaptation practices.

Each perception indicator above was given equal weight for computing.
The perception index is a simple average of the above five perception indicators.

Source: Based on the program-end household survey.

GEF Indicator 1.2.1.3

Indicator	Unit of Measurement	Achievement at Completion
Climate-resilient agricultural practices introduced to promote food security needs	Yes/No	Yes. Practices such as climate-resilient varietal replacement, crop and livelihood diversification, inter-cropping, are likely to address food security needs.

Source: Based on household survey data and Fuzzy Cognitive Mapping-based modeling (FCM).

GEF Indicator 2.3.1.1

Indicator	Unit of Measurement	Achievement at Completion		
		Madhya Pradesh	Bihar	Overall
Risk reduction and awareness activities introduced at the local level.	% of awareness among sample farmers	74.1	92.3	83.2

Source: Based on household surveys.

GEF Indicator 2.2.1

Indicator	Unit of Measurement	Achievement at Completion				
		Madhya Pradesh		Bihar		Overall
		Original villages	Scale-up villages	Original villages	Scale-up villages	
Number and type of targeted institutions with increased adaptive capacity to reduce risks of and response to climate variability	SHGs trained	1,005	2,840	1,472	3,389	8,706
	VOs trained	100	310	100	283	793

Source: Based on data provided by SRLMs

GEF Indicator 2.3.1.2

Indicator	Unit of Measurement	Achievement at Completion		
		Madhya Pradesh	Bihar	Overall
Number and type of community groups trained in climate change risk reduction	Number of SHGs	850	360	1210

Source: Based on data provided by SRLMs

GEF Indicator 2.2.1.1

Indicator	Type of staff	Achievement at Completion				
		Madhya Pradesh		Bihar		Overall
		Original villages	Scale-up villages	Original villages	Scale-up villages	

Number of staff trained on technical adaptation themes	State and district offices	112	17	35	325	489
Comments: i) NIRD&PR trained 200 district and sub-district staff of SLACC on climate adaptation. ii) NIRD&PR trained 400 CRPs and state functionaries on a certified course on climate change adaption, of which 398 CRPs were certified by the National Institute of Agricultural Extension Management. iii) Network partners also trained the staff on various technical adaptation themes.						

Source: Based on data provided by SRLMs and NIRD&PR.

GEF Indicator 1.1.1

Indicator	**Unit of Measurement**	**Actual Achievement at Completion**
Adaptation actions implemented in national/sub-regional development frameworks.	Adaptation Guidelines document	Advisory guidelines for CCAP developed by MoRD and disseminated to all the SRLMs
Ministry of Rural Development issued guidelines to all SRLMs which specifies modalities for accessing climate adaptation funds by various VOs through SRLMs for its effective utilization. Climate adaptation funds are aimed at meeting end-to-end requirements of vulnerable communities and for their sustainability and economic viability.		

Source: Guidelines shared by the NMMU.

ANNEX 9. MAPS

Bihar

Madhya Pradesh